

Nos. 2023-1218 and 2023-1274

**UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT**

SUNOCO PARTNERS MARKETING & TERMINALS L.P.,

Plaintiff-Appellant,

v.

POWDER SPRINGS LOGISTICS, LLC,
MAGELLAN MIDSTREAM PARTNERS L.P.,

Defendants-Cross-Appellants.

On Appeal from the United States District Court for the District of Delaware,
in No. 1:17-cv-1390-RGA, Honorable Richard G. Andrews, Judge

**OPENING AND RESPONSE BRIEF FOR DEFENDANTS-CROSS-
APPELLANTS**

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LLC**

July 21, 2023

REPRESENTATIVE CLAIM

31. A computer-implemented method for blending a butane stream and a gasoline stream comprising the steps of:

- a) receiving a first measurement indicating a vapor pressure of the gasoline stream;
- b) calculating a blend rate at which the butane stream can be blended with the gasoline stream;
- c) transmitting an instruction to a programmable logic controller for adjusting the butane stream to the calculated blend rate for blending with the gasoline stream and distributing at a rack; and
- d) receiving a second measurement indicating a vapor pressure of the blended gasoline stream and butane stream.

Appx190(16:8-21).

CERTIFICATE OF INTEREST

Counsel for Defendants-Cross-Appellants Magellan Midstream Partners L.P., Nitika Gupta Fiorella, certifies that the following information is accurate and complete to the best of his/her knowledge:

- 1. Represented Entities.** Prove the full names of all entities represented by undersigned counsel in this case. Fed. Cir. R. 47.4(a)(1)

Magellan Midstream Partners L.P.

- 2. Real Party In Interest.** Provide the full names of all real parties in interest for the entities. Do not list the real parties if they are the same as the entities. Fed. Cir. R. 47.4 (a)(2).

Magellan GP, LLC

Magellan OLP, L.P.

Magellan Logistics & Services L.P.

Magellan NGL, LLC

- 3. Parent Corporations and Stockholders.** Provide the full names of all parent corporations for the entities and all publicly held companies that own 10% or more stock in the entities. Fed. Cir. R. 47.4 (a)(3).

N/A

- 4. Legal Representatives.** List all law firms, partners, and associates that (a) appeared for the entities in the originating court or agency or (b) are expected to appear in this court for the entities. Do not include those who have already entered an appearance in this court. Fed. Cir. R. 47.4(a)(4).

Fish & Richardson P.C.: Grayson Sundermeir, Casey Kraning, Rae Crisler, Karrie Wheatley

- 5. Related Cases.** Other than the originating case(s) for this case, are there related or prior cases that meet the criteria under Fed. Cir. R. 47.5(a)?

Sunoco Partners Marketing & Terminals L.P. v. U.S. Venture, et al.,
1:15-cv-08178 (N.D. Ill. 2015)

Sunoco Partners Marketing & Terminals L.P. v. U.S. Venture, Inc., No. 2020-1640 (Fed. Cir.)

Sunoco Partners Mktg. & Terminals L.P. v. U.S. Venture, Inc. No. 2023-1739 (Fed. Cir.)

Sunoco Partners Marketing & Terminals L.P. v. U.S. Venture, Inc., No. 4:19-cv-01145 (S.D. Tex.)

Sunoco Partners Mktg. & Terminals L.P. v. U.S. Venture, Inc., No. 2022-1899 (Fed. Cir.)

6. **Organizational Victims and Bankruptcy Cases.** Provide any information required under Fed. R. App. P. 26.1(b) (organizational victims in criminal cases) and 26.1(c) (bankruptcy case debtors and trustees). Fed. Cir. R. 47.4(a)(6)

N/A

7. **Information required under Fed. R. App. P. 26.1(b) (organizational victims in criminal cases) and 26.1(c) (bankruptcy case debtors and trustees):**

N/A

July 21, 2023

/s/ Nitika Gupta Fiorella
Nitika Gupta Fiorella

**COUNSEL FOR MAGELLAN
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CERTIFICATE OF INTEREST

Counsel for Defendants-Cross-Appellants, Powder Spring Logistics, LLC,
David S. Moreland, certifies that the following information is accurate and
complete to the best of his knowledge:

- 8. Represented Entities.** Prove the full names of all entities represented by undersigned counsel in this case. Fed. Cir. R. 47.4(a)(1)

Powder Springs Logistics, LLC

- 9. Real Party In Interest.** Provide the full names of all real parties in interest for the entities. Do not list the real parties if they are the same as the entities. Fed. Cir. R. 47.4 (a)(2).

N/A.

- 10. Parent Corporations and Stockholders.** Provide the full names of all parent corporations for the entities and all publicly held companies that own 10% or more stock in the entities. Fed. Cir. R. 47.4 (a)(3).

Trinidad Products, Inc.

Colonial Pipeline Company

Magellan OLP, L.P.

Magellan Midstream Partners, L.P.

- 11. Legal Representatives.** List all law firms, partners, and associates that (a) appeared for the entities in the originating court or agency or (b) are expected to appear in this court for the entities. Do not include those who have already entered an appearance in this court. Fed. Cir. R. 47.4(a)(4).

Morris, Nichols, Arsht & Tunnell LLP; Stephen M. Schaetzel

- 12. Related Cases.** Other than the originating case(s) for this case, are there related or prior cases that meet the criteria under Fed. Cir. R. 47.5(a)?

Sunoco Partners Marketing & Terminals L.P. v. U.S. Venture, et al.,
1:15-cv-08178 (N.D. Ill. 2015)

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2020-1640 (Fed. Cir.)

Sunoco Partners Mktg. & Terminals L.P. v. U.S. Venture, Inc. No. 2023-1739 (Fed. Cir.)

Sunoco Partners Marketing & Terminals L.P. v. U.S. Venture, Inc., No. 4:19-cv-01145 (S.D. Tex.)

Sunoco Partners Mktg. & Terminals L.P. v. U.S. Venture, Inc., No. 2022-1899 (Fed. Cir.)

- 13. Organizational Victims and Bankruptcy Cases.** Provide any information required under Fed. R. App. P. 26.1(b) (organizational victims in criminal cases) and 26.1(c) (bankruptcy case debtors and trustees). Fed. Cir. R. 47.4(a)(6)

N/A

- 14. Information required under Fed. R. App. P. 26.1(b) (organizational victims in criminal cases) and 26.1(c) (bankruptcy case debtors and trustees):**

N/A

July 21, 2023

/s/ David S. Moreland
David S. Moreland

**COUNSEL FOR
POWDER SPRINGS LOGISTICS, LLC**

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STATEMENT OF RELATED CASES

This case has not previously been before this Court or any other appellate court. U.S. Patent Nos. 6,679,302 and 7,032,629, were litigated in *Sunoco Partnership Marketing & Terminals L.P. v. U.S. Venture, Inc.*, 436 F.Supp.3d 1099, 1128-1130 (N.D. Ill. 2020) (*U.S. Venture I*), where the district court awarded Sunoco \$2 million. A panel of this Court (Judges Prost, Reyna, and Stoll) affirmed that award and remanded on other grounds. *Sunoco Partners Marketing & Terminals L.P. v. U.S. Venture, Inc.*, 32 F.4th 1161, 1180-81 (Fed. Cir. 2022) (*U.S. Venture II*). The district court resolved the remand issues and also rejected Sunoco's argument that this Court's opinion required review of an additional issue, not included in the remand order: reconsideration of the district court's denial of lost profits. *Sunoco Partners Mktg. & Terminals L.P. v. U.S. Venture, Inc.*, No. 1:15-cv-8178, 2023 WL1475116, *6-10 (N.D. Ill. Feb. 2, 2023) (*U.S. Venture III*). Both parties appealed, and that appeal is pending before this Court. *Sunoco Partners Mktg. & Terminals L.P. v. U.S. Venture, Inc.* No. 2023-1739 (Fed. Cir.) (*U.S. Venture IV*).

U.S. Patent No. 9,207,686, was litigated in *Sunoco Partners Mktg. & Terminals L.P. v. U.S. Venture, Inc.*, 598 F. Supp. 3d 520, 531-536 (S.D. Tex. 2022) (*U.S. Venture Tex. Op.*), where the district court entered judgment of invalidity under 35 U.S.C. § 101 and of non-infringement. Sunoco's appeal is pending before this Court. *Sunoco Partners Mktg. & Terminals L.P. v. U.S. Venture, Inc.*, No. 2022-1899 (Fed. Cir.).

JURISDICTIONAL STATEMENT

The district court had subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338. The district court entered final judgement on October 24, 2022, and Cross-Appellants timely noticed their appeal on December 28, 2022. Appx23669-23670. This Court has jurisdiction under 28 U.S.C. § 1295(a)(1).

STATEMENT OF THE ISSUES

DIRECT APPEAL

1. Whether Sunoco is collaterally estopped from seeking a new damages trial based on the exclusion of its Butane Supply Agreement (BSA)-based damages theories, where Sunoco already litigated the viability of those theories, and this Court conclusively resolved those issues against Sunoco?
2. Whether the district court properly excluded Sunoco's damages opinions under *Daubert*, where they were based on the full, unapportioned value of BSAs—agreements this Court has already found encompass value beyond the patents?
3. Whether, at trial, the district court properly refused to (1) instruct the jury on lost profits, where Sunoco had no properly apportioned theory to present and (2) allow Sunoco to ask the jury to speculate as to the proper apportionment of the BSAs to arrive at a reasonable royalty?
4. Whether the district court properly granted JMOL of non-infringement of claims requiring “receiving” or “transmitting” butane vapor pressure, where Sunoco only argued that the accused systems have the butane

vapor pressure “baked in” to their blending equation, but never presented any evidence that they “received” or “transmitted” the “baked in” value?

5. Whether the district court properly refused to enhance damages after careful application of the *Read* factors, most of which it correctly found did support enhancement?

CROSS-APPEAL

6. Whether the district court abused its discretion in awarding Sunoco pre-verdict supplemental damages, where Sunoco had in its possession the information it needed to calculate such damages before trial but chose not to present it to the jury?

7. Whether the district court erred in failing to hold Sunoco’s claims invalid under Section 101, where they are directed to abstract ideas related to receiving and manipulating blend data to make a calculation and contain no inventive concept?

INTRODUCTION

This Court should finally and conclusively shut down Sunoco’s multi-year, multi-defendant effort to extract a windfall of *12x the damages* this Court has already said its patents are worth. It has many ways to do so. The first and most straightforward is to hold the challenged claims patent ineligible because they are directed to the abstract idea of gathering data and making a blend calculation, consistent with the Texas court’s ruling on similar claims.

The second is to bar Sunoco’s damages arguments on collateral estoppel grounds. This Court, among others, has already evaluated and rejected Sunoco’s damages theories based on the full value of its Butane Supply Agreements (BSAs)—which undisputedly encompass a “basket of services” beyond a license to the asserted patents—as contravening black-letter apportionment principles. Undeterred, Sunoco presses forward with the same arguments in this appeal, without *any explanation* for why it should not be estopped or how the Illinois case is different. That is because it has none.

Third, this Court should affirm the district court’s rejection of Sunoco’s improper attempt to avoid doing what this Court has said must be done in *every case*: reliably tie the measure of damages to the value of the patented invention, and no more. The district court properly held Sunoco to its burden, and when Sunoco could not meet that burden, it excluded Sunoco’s expert, excluded Sunoco’s lost profits theory, and allowed Sunoco to seek a reasonable royalty based on an apportioned \$0.02/gallon rate from a previous license. The jury

ultimately awarded Sunoco \$12 million, consistent with the Illinois court's damages award that this Court affirmed. Sunoco has shown no clear error or abuse of discretion in the district court rulings, so it should affirm here as well.

Sunoco's Introduction ends not with legal support for of its damages theory, but with accusations of laudatory gloating. Far from gloating, Cross-Appellants statement that this case amounted to "4 years of litigation over a mere \$12 million" is one of frustration. At every turn, even in the face of clear direction from this Court on these very facts and this very issue, Sunoco has flouted well-established damages law to try to extract unsupported damages on invalid patents. This Court should, once and for all, end Sunoco's litigious quest for a windfall from its automated butane blending patents, and stop the drain on party and judicial resources this case has caused, by reversing the district court's Section 101 finding or affirming its unapportioned BSA-based damages rulings.

STATEMENT OF THE CASE

I. HISTORY OF BUTANE BLENDING

For decades, many companies, including Magellan, have blended butane into gasoline to improve engine performance and increase profitability. *U.S. Venture II*, 32 F.4th at 1167; Appx169(1:29-51).

Butane's high volatility means that blended gasoline adds to emissions, so the EPA promulgated standards in 1989 to regulate blended gasoline RVP. Appx169(1:52-2:4). Blenders have thus historically had to measure and

monitor the amount of butane added to ensure the RVP of blended gasoline is within the EPA's guidelines. *Id.*; *U.S. Venture II*, 32 F.4th at 1167.

Companies have also historically blended butane into gasoline at various points along the supply chain. Appx169(1:65-66); *U.S. Venture II*, 32 F.4th at 1167. Early on, operators (1) manually sampled and measured gasoline RVP, (2) calculated the amount of butane to add to each unit of gasoline (called the blend ratio), and (3) manually input the desired blend ratio into blending system controllers, which adjusted the butane or gasoline flow to achieve that ratio. Appx21941-21942(173:18-174:9); Appx22845-22846(1077:19-1078:9); Appx22575(807:12-20).

In the 1990s, the Grabner online analyzer arrived, which the Sunoco inventors described as "the key" to automating these previously manual blending steps. Appx22185-22186(417:8-418:25); *see also* Appx22165-22174(397:18-406:18). The Grabner online analyzer provided realtime RVP measurement, which allowed for continuous RVP monitoring and control. Appx22186(418:4-25); Appx22173-22174(405:19-406:22); Appx22179-22182(411:25-414:1); Appx22732-22734(964:24-966:12); Appx22741(973:5-17); Appx199(3:3-11). By this time, computers had also replaced other manual steps, including calculating the blend ratio and controlling flow devices to inject butane. Appx22647-22650(799:14-882:19); Appx22751-22752(983:13-984:19).

Each of the three challenged patents describe automated methods of butane blending.

II. SUNOCO’S BSAs AND THE BUCKEYE AGREEMENT

In 2010, Sunoco acquired the ’302 and ’629 patents¹ as part of a larger transaction for Texon’s butane blending business for \$140 million. Importantly, and contrary to Sunoco’s claim (at 5) that the \$140 million was “for the patents,” the value of the ’302 and ’629 patents was a fraction of the purchase price. Beyond the patents, Sunoco also acquired Texon’s employees, trade secrets, technical know-how, physical assets, existing blending contracts, and more. Appx5128-5149; Appx8699.

Sunoco also acquired the patent holding company, MCE Blending, LLC (“MCE”), which was created by Texon and inventor Mattingly’s company Mid Continent Energy Co. (“Mid Continent”) for the sole purpose of holding and licensing three patents, including the ’302 and ’629 patents. Appx5147. At the time, Texon owned an 85% interest in MCE, while Mid Continent owned 15%. Appx5153(30:1-31:23). As part of the \$140 million, Sunoco acquired Texon’s 85% interest, and paid Mid-Continent \$787,500 for its 15% interest in MCE. Appx5145. The \$787,500 for a 15% share equates to a \$5.25 million valuation for MCE’s assets—which were only the patents.

¹ The ’686 patent had not yet issued. Appx191-206.

Sunoco then began monetizing its butane blending business using BSAs. BSAs provide a royalty-free license to Sunoco’s butane blending portfolio—which include numerous patents beyond just the patents-in-suit—and provide a “basket of services to make life as easy as possible on [its] customers.” *See, e.g.,* Appx5050-5055; Appx5203-5213; Appx5222-5223; Appx5237-5238(53:16-54:7); Appx5244; Appx8699-8700; Appx8706. As Sunoco acknowledges (at 6-7), this “basket of services” includes designing, engineering, constructing, and maintaining the blending systems, supplying the butane, providing regulatory oversight support, maintenance and support services, risk management, customer services, and hedging, among others. Appx5262. Sunoco’s promotional materials confirm the patents were just one part of Sunoco’s “full service offering” under BSAs:



Appx5244. As Sunoco witness Joseph Colella explained, Sunoco’s customers chose to partner with Sunoco because of the expertise and infrastructure Sunoco offers through its BSAs, which in turn increases efficiency. Appx23-24; Appx5330-5331.

Sunoco’s BSAs also include use of its proprietary, trade secret blending algorithm, which is not covered by any Sunoco patent. Appx23-25; Appx5053-5054; Appx5206-5208; Appx5222; Appx5336(70:9-21); Appx5343(141:7-20). As Sunoco witness Keith Buchanan explained, this proprietary and unpatented algorithm is essential for Sunoco and its licensees to maximize the amount of butane they can blend, thereby maximizing profit. Appx5336(70:9-21); Appx5054; Appx5343(141:7-20). Sunoco’s Dan Myers confirmed the algorithm’s value and also testified that it *drove demand* for Sunoco’s “full service offering,” stating “[t]he results of the blending, because of these algorithms, *I think was the selling point.*” Appx5054-5055; Appx5343(139:18-141:2). Sunoco’s damages expert, Keith Ugone, similarly conceded the algorithm “would contribute to the ability to maximize butane blending.” Appx5347(48:4-7). In sum, Sunoco’s witnesses repeatedly acknowledged that (1) Sunoco’s BSAs cover significantly more than a license to the patents-in-suit, and (2) various *unpatented* aspects of these agreements have value and in fact drive demand for the BSAs.

Sunoco was not the first to use BSAs; before Sunoco’s acquisition, Texon used them with its customers. Appx21946-21948(178:14-180:15); Appx7477-

7479(¶77). In the acquisition, Sunoco assumed Texon’s existing BSAs, except for those with a company called Buckeye. Appx15823-15824; Appx21945-21946(177:9-178:5); Appx21951-21952(183:10-184:13).

The Buckeye Agreement memorialized the terms between Sunoco and Texon relating to Buckeye business that Texon kept and consisted of two distinct parts.² Appx12428-12458. **First**, Texon would continue fulfilling BSA obligations for existing Buckeye sites and would pay a \$0.02/gallon royalty to Sunoco. Appx12433-12434; Appx21954(186:2-14). That \$0.02/gallon number is important because it represented a royalty Sunoco received simply because it had ownership of the blending patent portfolio (albeit more patents than just the patents-in-suit). **Second**, for any future Buckeye terminals (meaning blending operations that had not yet been built), Sunoco had a right of first refusal to take on the “turn key” services under a BSA at those terminals. Appx12433-12435; If Sunoco did not exercise its right, Texon could take on the BSA, splitting blending profits with Buckeye 50/50, and paying Sunoco 60% of Texon’s gross profits, meaning Sunoco would get 30% of the total gross profits. Appx12433-12434; Appx21954-21955(186:24-187:18); Appx15964-15965(19:20-20:9).

² While Sunoco and the district court referred to the agreement as the “Buckeye License,” that nomenclature is confusing given the two distinct parts to the agreement. Appx23227-23228(1459:4-1460:10); Appx20887-20888. Cross-Appellants thus refer to the entire agreement as the “Buckeye Agreement.”

This second provision in the Buckeye Agreement is referred to herein as the Texon/Buckeye BSA.

III. PROCEDURAL HISTORY

A. Relevant Pretrial Proceedings

Sunoco sued Magellan and PSL on multiple claims across five patents. Cross-Appellants successfully challenged many claims on the way to trial: the district court held certain '302 claims patent ineligible on summary judgment, and this Court affirmed the PTAB's invalidation of all claims of two patents, U.S. Patent Nos. 9,494,948 and 9,606,548, as anticipated and/or obvious over the prior art. Appx8752-8768; Appx9-11; *Sunoco Partners Mktg. & Terminals L.P. v. Magellan Midstream Partners L.P.*, 853 F. App'x 668 (Fed. Cir. 2021) (non-precedential Rule 36 affirmance).

Cross-Appellants also successfully challenged Sunoco's damages theories before trial, based on which Sunoco sought hundreds of millions in damages. Appx5186; Appx15119-15129. Sunoco's expert Ugone arrived at that amount by improperly attributing the full value of Sunoco's BSAs to the asserted patents, when the BSAs unquestionably encompass more than the patents. To give the Court a sense of how much more, Buckeye paid Sunoco \$0.02/gallon under the Buckeye Agreement for the right to keep blending at existing terminals using only the patented technology *without* the other BSA services. Appx12433-12434. Ugone's BSA theory said Cross-Appellants would have to pay up to 12 times as much—\$0.25 cents per gallon to use the same patented

technology at Magellan's existing terminals. Appx5200. Cross-Appellants moved to exclude Ugone's opinions under *Daubert* because he failed to apportion the BSAs to reflect only the value of the patented invention, and the district court granted that motion. Appx8697-8714.

The district court then gave Ugone leave to try to show the required apportionment. Appx8713-8714. Instead of heeding the Court's order, Ugone advanced *the same damages figures* from his first report. Appx8971; Appx8989-8995. His purported justification was that no apportionment was necessary because the patents were the "sole driver" for the BSAs, or alternatively, that the services provided by Sunoco under its BSAs were worth (1) nothing, or (2) only *one collective penny* per gallon of butane blended. *Id.* Given the undisputed testimony from Sunoco's witnesses that the unpatented services provide significant value, and are in fact the "selling point" for the BSAs, the district court unsurprisingly struck his second report for Ugone's (now willful) refusal to apportion. Appx22-25.

Undeterred, Sunoco tried *again* pre-trial to resurrect its windfall damages theory by (1) having its witnesses testify at trial that the patents drove demand for the BSAs, and (2) relying on the 30% profit sharing arrangement from the Texon/Buckeye BSA. Appx11144-11149. The district court shut down both efforts. On the first, the district court found Sunoco's theory "is no more proper a theory of damages coming from fact witnesses than it would have been coming from Dr. Ugone" and that "someone must apportion" the BSAs, which

is “not a task for a fact witness.” Appx14509(95:18-97:7). On the second, the district court held, consistent with the *Daubert* rulings regarding Sunoco’s unapportioned BSAs, that the Texon/Buckeye BSA was also an improper measure of damages. Appx15978(33:4-13). The district court thus made clear that the jury would be instructed that Sunoco “is not permitted to attribute the value of the BSAs” or “the full value of the Buckeye [Agreement]” to the patents. Appx15978(33:4-16); Appx16013(68:5-22).

B. The Jury Trial

A six-day trial was held in November 2021, in which liability was tried before damages. Appx14536. The jury found all asserted claims valid and willfully infringed. Appx20853-20861.

Throughout trial, Sunoco elicited conclusory, speculative testimony from witnesses on the value of the patents in relation to Sunoco’s BSAs and the Texon/Buckeye BSA. For example, despite acknowledging Sunoco provides numerous goods and services through its BSAs, Colella nonetheless speculated that Sunoco’s customers entered BSAs “because of the patents.” Appx22010-22016(242:1-248:23); *see also* Appx23139(1371:4-25) (testifying about the Texon/Buckeye BSA). Later, when asked by Sunoco’s counsel if he could estimate the value of any of these “additional services that Sunoco provides,” Colella speculated about just two of them: he valued “half a cent” for hedging and “about \$500,000 per site per year” for maintenance. Appx23143-23144(1375:22-1376:13).

Sunoco's trial presentation indicated it was going to again seek damages beyond the value of its patents through BSAs. *See, e.g.*, Appx20864-20867. And it did just that. Sunoco pushed for lost profits instructions to the jury, despite having presented no properly apportioned lost profits theory. The district court properly rejected Sunoco's proposed instructions. Appx96-100; Appx82-86. Next, during JMOL motions in the damages phase, Sunoco confirmed its intention to seek reasonable royalty damages from the jury based ***on the full 30% or 50%*** BSA rates, despite the district court's clear edict precluding Sunoco from doing so. Appx23225-23237(1457:20-1470:3); Appx15978(33:4-16); Appx16013(68:5-22). The district court rejected that argument as well. Appx23226-23229(1458:4-1461:7).

In response, Sunoco pivoted again and argued Colella had apportioned the value of certain services from the BSAs, so the jury should be able to weigh that testimony with the 30% and 50% rates to come up with its own rate for what the patents are worth. Appx23229-23231(1461:8-1463:2); Appx23232-23233(1464:18-1465:15); Appx23235-23236(1467:10-1469:4). The district court properly precluded Sunoco from asking the jury to speculate as to "some value that's intermediate" to the "full value" of the profit share under its BSAs. Appx23229-23231(1461:5-1463:15); Appx23232-23238. As such, Sunoco sought damages based on the \$0.02/gallon rate from the Buckeye Agreement. Appx23254-23257(1486:9-1489:4); Appx21091-21093.

During closing argument, Sunoco calculated damages based on the \$0.02/gallon rate. Sunoco used data reflecting the volume of butane Cross-Appellants blended using the infringing systems and multiplied it by the \$0.02/gallon rate to arrive at \$12 million. Appx23254-23257(1486:5-1489:11). Importantly, while Sunoco had in its possession data reflecting Cross-Appellants' infringing blend volumes through October 2021 (one month before trial), Sunoco only used data through January 2019 in its calculations. Indeed, it never presented the updated volume data to the jury. *See* Appx21581; Appx23256(1488:6-24). The jury thus awarded \$12 million in total damages to compensate Sunoco for Cross-Appellants' infringement. Appx21091-21093.

C. Relevant Post-Trial Proceedings

After trial, Cross-Appellants renewed their JMOL motion of non-infringement of the claims that require "receiving" a butane vapor pressure measurement (claims 18 and 22 of the '629 patent) and "transmitting" a butane vapor pressure measurement (claims 16 and 17 of the '302 patent). Appx140. As Cross-Appellants explained, Sunoco's expert opined only that the butane vapor pressure value is "baked into" Cross Appellants' blending equation, but he never demonstrated how such a "baked in" value could be "transmitted" or "received" under the plain and ordinary meaning of those terms. Appx140; Appx23604(37:19-40:7). The district court granted Cross-Appellants' motion. Appx140.

The parties also agreed that certain issues were for the Court's determination after trial, including (1) whether the facts warrant enhanced damages and (2) whether the claims are invalid under 35 U.S.C. § 101. Appx18711-18712; Appx21244-21245; Appx21507. On enhancement, the district court carefully reviewed the *Read* factors and determined they weighed against enhancing damages on balance. Appx156. On patent eligibility, the district court departed from the previous opinion invalidating multiple '302 patent claims, and concluded none of the remaining claims were directed to an abstract idea under *Alice* Step 1. Appx128; Appx131-132.

D. Related Litigations

Cross-Appellants were not Sunoco's only targets. Sunoco also sued U.S. Venture in the Northern District of Illinois on the '302 and '629 patents. *U.S. Venture I*, 436 F.Supp.3d at 1107. In that case, like here, Sunoco sought inflated damages based on unapportioned BSAs. *Id.* at 1127-29. The Illinois court determined that Ugone's failure to apportion the BSAs to reflect only the value of the patents meant Sunoco could not recover lost profits and could not recover reasonable royalty damages based on the full value of the BSAs. *Id.* Ultimately, the Illinois court adopted the lump-sum reasonable royalty proposed by U.S. Venture's expert of \$2 million, which was consistent with a \$0.02/gallon rate. *Id.* at 1129-30.

Sunoco appealed, arguing the district court erred in rejecting Ugone's BSA-based damages. *U.S. Venture II*, 32 F.4th at 1179-81. This Court

affirmed the denial of lost profits, finding the BSAs “reflect a bundle of goods and services beyond just the patented invention” such that Sunoco’s damages figure “represents more than just the damage Sunoco incurred from Venture’s infringement” and “does not translate into the value of the patents.” *Id.* at 1180 (brackets and quotation marks omitted). This Court also agreed that Ugone’s reasonable royalty opinions were untethered to the value of the patents and affirmed the \$2 million award. *Id.* at 1180-81.

This Court remanded for the district court to evaluate two issues, which it did. *U.S. Venture III*, 2023 WL 1475116, at *1. On remand, Sunoco asked the district court to address a third issue: whether Sunoco was entitled to lost profits. *Id.* Although Sunoco recognized this Court “explicitly affirmed the decision to deny lost profits,” it nonetheless argued this Court’s decision was “internally inconsistent” requiring reconsideration of this non-remanded issue. *Id.* at 6. The district court disagreed. *Id.* at 6-10. Sunoco has appealed the district court’s refusal to reconsider lost profits. *See U.S. Venture IV*, No. 23-1739, Dkt. 5 (Fed. Cir.).

Sunoco’s also sued U.S. Venture in the Southern District of Texas on the ’686 patent. *U.S. Venture Tex. Op.*, 598 F.Supp.3d 520 at 523. There, U.S. Venture moved for summary judgment that ’686 claims 16-17 are patent ineligible. *Id.* at 530-36. The Texas court agreed. *Id.* at 535-41. Sunoco has appealed that ruling as well (Appeal No. 2022-1899).

SUMMARY OF ARGUMENT

This Court has multiple ways to end this protracted litigation, consistent with its previous decision and the decisions of courts across the country.

As discussed in the cross-appeal, this Court can avoid all of Sunoco's challenges by holding the claims encompass unpatentable subject matter and are thus patent ineligible. The claims broadly and generically recite gathering data and making a blending calculation, demonstrating they are directed to an abstract idea, with no inventive concept to save them. In concluding otherwise, the district court ignored the results-oriented focus of the claims, improperly relied on alleged advances not recited in the claims, and made clearly erroneous findings as to prior blending operations. This Court should thus find the claims patent ineligible, obviating the need to address any other issues in this case.

If the Court addresses any of Sunoco's challenges, it should hold Sunoco estopped from advancing the unapportioned BSA-based damages theories that Sunoco already raised and lost in Illinois and on appeal or alternatively affirm the district court's rulings on these issues.

This Court should also affirm the district court's grant of JMOL of non-infringement and its refusal to enhance damages. On non-infringement, Sunoco relied on vague arguments that the accused system have butane RVP "baked in" to the blend equation, but failed to prove the accused systems "receiv[e]" or "transmit[]" the butane RVP, as the claims require. On enhanced damages, the district court properly recognized this was a "close case" with many *Read*

factors weighing against a finding of egregious and pirate-like behavior on the part of Cross-Appellants, dooming its bid for enhancement.

The only damages-related ruling this Court should reverse is the district court's award of over \$6 million (nearly half the jury's damages award) in *pre-verdict* supplemental damages. Sunoco had the information it needed to ask the jury to award damages for the full damages period at trial but it failed to do so. This Court should thus hold the district court abused its discretion in excusing Sunoco's failure of proof and invading the jury's province to award damages.

ARGUMENT

I. STANDARD OF REVIEW

When the Federal Circuit “review[s] a damages determination, the clearly erroneous standard applies to the review of the amount of damages, while the abuse of discretion standard applies to the review of the methodology chosen to compute damages.” *In re Cambridge Biotech. Corp.*, 186 F.3d 1356, 1369 (Fed. Cir. 1999). Sunoco's suggestion (at 20, 60) that *de novo* review may apply to the district court's damages rulings is incorrect. The case it cites, *Rite-Hite Corp. v. Kelley Co.*, held only that “[w]hether the lost profits at issue are legally compensable is a question of law.” 56 F.3d 1538, 1544 (Fed. Cir. 1995) (en banc). The question here does not involve what types of damages are legally compensable so *de novo* review does not apply.

This Court applies regional circuit law to review JMOL decisions, which the Third Circuit reviews *de novo*. See *Graboff v. Colleran Firm*, 744 F.3d 128,

134 (3d. Cir. 2014). This Court reviews a district court's decision on enhanced damages and supplemental damages for abuse of discretion. *See Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 579 U.S. 93, 107 (2016); *EcoServices, LLC v. Certified Aviation Servs., LLC*, 830 F. App'x 634, 640 (Fed. Cir. 2020) (non-precedential).

"Patent eligibility is a question of law that may involve underlying questions of fact." *PersonalWeb Techs. LLC v. Google LLC*, 8 F.4th 1310, 1314 (Fed. Cir. 2021); *Am. Axle & Mfg., Inc. v. Neapco Holdings LLC*, 967 F.3d 1285, 1291-92 (Fed. Cir. 2020). "A district court's decision on patent eligibility is reviewed de novo except that its factual determinations are reviewed for clear error." *Ameranth, Inc. v. Domino's Pizza, LLC*, 792 F. App'x 780, 782 (Fed. Cir. 2019) (non-precedential).

II. SUNOCO IS NOT ENTITLED TO A NEW DAMAGES TRIAL

Five times now Sunoco has tried and failed to claim damages beyond the value of its patents by relying on unapportioned BSAs. The District of Delaware rejected this theory three times. Appx8697-8714; Appx22-25; Appx23225-23237(1457:20-1469:23). The Northern District of Illinois rejected it. *U.S. Venture I*, 436 F.Supp.3d 1099 at 1128-30. And, notably, this Court rejected it too. *U.S. Venture II*, 32 F.4th at 1180-81. Sunoco sixth attempt on appeal is just as unsupported as the previous five.

This Court need not address any of Sunoco's arguments for a simple reason: Sunoco is collaterally estopped from peddling the same rejected BSA-

based damages theory. Tellingly, despite this Court's affirmance in *U.S. Venture II* that a \$0.02/gallon royalty reflects the value of Sunoco's patents, Sunoco does not once address this opinion, much less explain why it should be heard again on the same arguments and be awarded ***12 times that amount*** in this case. The Court should reject Sunoco's arguments for this reason alone.

If the Court reaches Sunoco's damages arguments, it should find that the district court did not abuse its discretion in those decisions, because they all stem from Sunoco's improper attempt to recover damages beyond the value of its patented invention.

A. Sunoco is Collaterally Estopped from Using its Unapportioned BSAs as a Measure of Infringement Damages

This Court has already rejected Sunoco's argument that its damages should be tied to unapportioned BSAs, so it should refuse to consider the same arguments here.

Collateral estoppel precludes a plaintiff "from asserting a claim that the plaintiff had previously litigated and lost against another defendant." *Parklane Hosiery Co. v. Shore*, 439 U.S. 322, 329 (1979). It applies where: (1) the issue sought to be precluded is the same as the one involved in the prior action; (2) the issue was actually litigated; (3) the issue was determined by a valid and final judgment; and (4) the determination was essential to the prior

judgment.” *Uniloc USA, Inc. v. Motorola Mobility LLC*, 52 F.4th 1340, 1346-47 (Fed. Cir. 2022).³ All four factors are satisfied here.

Factor 1. “[T]here is no doubt that the present issue is identical to [the] issue[s] previously asserted.” *Cooney v. Booth*, 210 F. App’x 213, 216 (3d Cir. 2007) (non-precedential). In the Illinois case, like this one, Sunoco submitted a damages report from Ugone, who tied the measure of Sunoco’s infringement damages (both lost profits and reasonable royalty) to Sunoco’s unapportioned BSAs. *U.S. Venture I*, 436 F.Supp.3d at 1128-29. The Illinois court, like the Delaware court here, held that Ugone’s failure to apportion the value of the patents from the BSAs doomed both his lost profits and reasonable royalty opinions. *Id.* Ultimately, the Illinois court adopted the reasonable royalty proposed by US Venture’s expert of \$2 million, which is in line with the \$0.02/gallon royalty rate the jury applied in this case. *Id.* at 1129-30.

On appeal from the Illinois case, Sunoco insisted that its BSAs were an appropriate measure of damages, that the district court erred by rejecting Ugone’s BSA-based lost profits theory, and that it was entitled to far more than reasonable royalty damages commensurate with a \$0.02/gallon royalty rate. *See U.S. Venture II*, Principal Brief for Plaintiff-Cross Appellant, Dkt. 34 at 3-4, 55-

³ The same principles of collateral estoppel apply regardless of whether this Court’s law or regional Third Circuit law applies. *See id.*

78; *U.S. Venture II*, 32 F.4th at 1179-80. Sunoco makes the same arguments here. *See e.g.*, Blue Brief at 2-3, 17-19, 21-63.

To the extent Sunoco contends that the issues are not the same because of additional decisions by the Delaware court (such as the court's refusal to instruct the jury on lost profits), that is incorrect. The issue in the Illinois proceeding was whether Sunoco was entitled to recover any lost profits damages, and any reasonable royalty damages based on the full value of its BSAs. Those are the same issues in this appeal, so the first factor is satisfied. *See Honeywell Int'l Inc. v. Universal Avionics Sys. Corp.*, 585 F. Supp. 2d 623, 629-34 (D. Del. 2008).

Factors 2 and 3. Sunoco had a full and fair opportunity to litigate its BSA-based damage theories in the Illinois case, and did so. Sunoco presented its unapportioned BSA theory to the Illinois court, and when that court rejected it, Sunoco appealed the decision to this Court. This Court fully evaluated Sunoco's arguments and affirmed the Illinois court because the BSAs "cover services beyond simply the value of the patents." *U.S. Venture II*, 32 F.4th at 1180. Sunoco did not petition for *certiorari*, so this Court's holding is final.

Factor 4. The Illinois court's refusal to award Sunoco lost profits or allow it to seek a royalty based on the BSAs was plainly necessary to the final judgment entered against Sunoco—indeed it dictated the amount of damages Sunoco was able to recover.

Sunoco’s steadfast refusal to accept what this and other courts have already said at least five times—that its BSA-based damages theories violate blackletter damages law—has already resulted in the significant expenditure of both party and judicial resources. And Sunoco shows no signs of stopping; its appeal from the Illinois court’s remand decision, where the court refused to *reconsider* Sunoco’s lost profits claim after this Court affirmed its denial, is currently pending. *U.S. Venture IV*, No. 23-1739, Dkt. 5 (Fed. Cir.). This Court should thus “conclusive[ly] resol[ve]” this multi-year, multi-defendant saga by finding Sunoco collaterally estopped from continuing to challenge the \$0.02/gallon royalty rate for its patented invention. *Montana v. United States*, 440 U.S. 147, 153 (1979).

B. The District Court Did Not Abuse its Discretion in Excluding Sunoco’s Unapportioned Damages Theories Before Trial

If this Court addresses Sunoco’s damages arguments, it should affirm the district court’s exclusion of Ugone’s opinions for failure to apportion.

This Court has already recognized that Sunoco’s BSAs “reflect a bundle of goods and services beyond just the patented invention.” *U.S. Venture II*, 32 F.4th at 1180; *see also* Appx23-24; Appx8699-8670; Appx8706. Ugone acknowledged this fact and further *admitted* that the non-patented services “lead to increased total profits earned from the butane blending.” Appx8706 (quotation marks omitted); Appx5163-5166(¶ 22e); Appx5173-5174(¶ 104); Appx8971-8976(¶ 5); *see also* Appx5069-5084. Sunoco witnesses also

confirmed that the non-patented features, including the blending algorithm, were the “selling point” for Sunoco’s licensees—not the patents. Appx23-25; Appx5343(139:18-141:2); Appx5337(135:6-137:21); Appx5340(60:10-17); Appx8700 (citing Appx5237-5238(53:10-54:7) and Appx5244).

Based on this undisputed evidence that the BSAs encompass value beyond the patents, the magistrate judge correctly struck Ugone’s first attempt to calculate damages based on the full value of the BSAs. Appx8706-8712. The district court correctly struck Ugone’s second attempt too, because Ugone failed to show the entire market value rule satisfied and failed to properly apportion each of the BSAs’ unpatented features. Appx22-25.

Sunoco’s scattershot arguments on appeal fail to satisfy the high bar to show the district court abused its discretion; indeed, Sunoco does not even try to distinguish the district court’s conclusions in this case from those of the Illinois court, which this Court affirmed. Consistent with its *U.S. Venture II* holding, this Court should affirm here as well.

1. The district court properly held Sunoco could not avoid apportionment through a “comparable license” theory

Sunoco’s attempt to avoid apportionment by calling its BSA-theory a “comparable license” theory fails for the same reasons its motion for reconsideration of the *Daubert* orders did. Appx10867-10869; Appx14486-14492(4:8-26:4); Appx14505-14506(79:2-84:14). As the district court properly concluded, “even if we call the theory about the BSAs a comparable license

theory, even if we treat it as disclosed, and we acknowledge that the BSAs are sufficiently comparable [and] could potentially be the basis for a damages theory, *Sunoco still needs to apportion to account for the non-patented features*, and Dr. Ugone did not do that. Sunoco has not done that.”

Appx14506(82:21-83:11). Sunoco has shown no abuse of discretion in the district court’s holding.

First, Sunoco argues (at 21) apportionment is not required because this is not a “typical” apportionment case involving multi-component products. But the district court already rejected that argument because this Court had made clear apportionment is required “*in every case*.” *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 67 (Fed. Cir. 2012) (quotations omitted); Appx8708; Appx14505-14506(78:11-84:14). Indeed, this Court has expressly required apportionment in the context of licensing rates. *See Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1232-33 (Fed. Cir. 2014); *Trell v. Marlee Elecs. Corp.*, 912 F.2d 1443, 1446-47 (Fed. Cir. 1990). Further, it was Sunoco’s choice to frame its damages in the context of lost BSAs. Appx8705; Appx8710-11; *see also* Appx14505-14506(80:7-82:20). Sunoco cites no case holding that a patentee can recover more than the value of its invention simply by advancing creative damages theories that do not fit the “typical” mold for patent damages. Nor does it matter that Sunoco only licenses its patents through BSAs; this Court has rejected the argument that a patentee may rely on an “internal ‘policy’ without regard to comparability,” stating that “[t]o hold

otherwise would improperly permit [the patentee] to hide behind its generic licensing arrangement to avoid the task of apportionment.” *Omega Pats., LLC v. CalAmp Corp.*, 13 F.4th 1361, 1379 (Fed. Cir. 2021).

Second, Sunoco is wrong (at 22, 48-52) that it did not need to apportion or satisfy the entire market rule simply because it relied on a “comparable license” theory. It is only where the comparable license already “incorporate[s] the required apportionment” that this Court has not required a *separate* apportionment or entire market value rule showing. *Elbit Sys. Land & C4I Ltd. v. Hughes Network Sys., LLC*, 927 F.3d 1292, 1301 (Fed. Cir. 2019); *Omega*, 13 F.4th at 1376-1382.

Third, Sunoco has failed to show the district court erred in concluding the BSAs have no such built-in apportionment. *See e.g.*, Appx14505-14506(78:11-84:14). Sunoco speculates (at 29) that the patents are the driving factor for its licensees to enter BSAs because licensees could have built and operated their own blending systems, and “surely would have done so absent Sunoco’s patents.” That is incorrect. First, even if Sunoco’s licensees *could* do so, it would not mean *the sole reason* they choose not to do so is the patents. There are many reasons why they might build and operate their own systems, including, for example, lack of capital, butane supply, or blending experience, or simply a desire to outsource the work. Second, Sunoco has not shown its licensees could build and operate their own systems; indeed, the only example it relies on is Phillips 66, which, as Colella testified, was “having difficulty

getting [its blending system] to work.” Appx7626(164:3-16). Third, Sunoco’s witnesses repeatedly testified that the BSAs provide value to licensees beyond the patents. *See* Appx23-24; Appx8706; Appx5163-5166(¶ 22e); Appx5173-5174(¶ 104); Appx5237-5238(53:10-54:7); Appx5244; Appx5330-5331; Appx5337(135:6-137:21); Appx5340(60:10-17); Appx5343(139:18-141:2). Sunoco’s Phillips 66 example makes this point—under its BSA, Sunoco “corrected and actually rebuilt” Phillips 66’s system that Phillips 66 could not get to work. Appx7626(164:3-16). This testimony confirms the value of BSAs extends far beyond the patents to include, for example, **constructing** and **operating** the blending systems, and shows apportionment is not built in. *Omega*, 13 F.4th 1361 at 1380.

None of Sunoco’s cited cases support its failure to apportion. In *Elbit*, the plaintiff’s damages expert relied on a previous agreement that he adjusted, based on the value of the patents themselves, to make “comparable.” *Id.* Here, Ugone made no such adjustments to the BSAs. In *Commonwealth Sci. & Indus. Rsch. Organization v. Cisco Sys., Inc.*, the district court relied on royalty rates from the parties’ prior licensing discussions, where the parties “negotiated over the value of the asserted patent, and no more.” 809 F.3d 1295, 1303-04 (Fed. Cir. 2015) (quotations omitted). Here, there was no previous negotiation over just the value of the asserted patents; indeed, any negotiations necessarily involved more than the value of the patents because of Sunoco’s “full service” BSA offerings. While Sunoco concludes (at 25) that the BSAs “establish the

market’s recognition that the value of Sunoco’s patents is appropriately measured by the profits from only the extra gasoline created using the patented system,” it cites no support for that assertion. And Sunoco’s own witnesses directly contradicted that assertion by explaining the value of the BSAs—which is reflected by the profits from the extra gasoline created—encompasses significantly more than just the patents. *See Appx23-25.*

Vectura Ltd. v. GlaxoSmithKline LLC does not move the needle either. 981 F.3d 1030, 1039-42 (Fed. Cir. 2020). That case involved “rather unusual circumstance[s]” where the evidence “clearly support[ed]” that the relied-upon license had “baked in” apportionment, and the defendant’s expert admitted it was “a very close comparable, much closer than you ever find in a patent case.” *See id.* (quotations omitted). Cross-Appellants’ expert admitted no such thing here, and the evidence does not “clearly support” finding BSAs have baked in apportionment because they include a “basket of services,” an unpatented algorithm, and licenses to unasserted patents. Sunoco’s suggestion (at 28) that the *Vectura* license “was nowhere close as comparable as Sunoco’s BSAs” is thus demonstrably false. *Bio-Rad Labs., Inc. v. 10X Genomics Inc.*, is similarly inapplicable because there the challenged expert’s royalty rate was “already apportioned in the comparable licenses.” 967 F.3d 1353, 1376 (Fed. Cir. 2020). Again, Ugone undertook no such apportionment of the BSAs here. Further, that this Court held the *Vectura* and *Bio-Rad* district courts ***did not*** abuse their

discretion in refusing to exclude theories is irrelevant to whether the district court here abused its discretion in excluding Ugone’s theories. It did not.

Finally, Sunoco’s separate arguments regarding its reasonable royalty opinions (at 47-52) fail for the same reasons. Ugone arrived at his range of royalty damages by applying the full value of profit share Sunoco receives from its BSAs (40%) to Cross-Appellants’ projected blending profit margins. *See, e.g.,* Appx8218-8222(¶¶ 190, 197, 199); Appx8230-8233(135:7-16, 142:15-22, 150:18-24, 155:15-22.) That was improper because the 40% rate includes value beyond the patents, specifically the unpatented algorithm that allows for maximum blending and the other “basket of services” that Sunoco provides. Sunoco’s arguments at (50-51) regarding the *royalty base*—i.e., Cross-Appellants’ blending profit margins and blended volumes—are irrelevant to whether Ugone applied a proper *rate* that reflects only the value of the patents. Further, Sunoco’s speculation (at 51) that the royalty determined from a hypothetical negotiation “could be higher” than the 40% BSA rate ignores the many reasons why the rate would be *lower*, given the numerous, valuable unpatented features.

Simply put, it was Sunoco’s burden to advance a legally viable theory that accounted for these considerations, and it failed to do so. This Court should thus conclude the district court did not abuse its discretion in striking Ugone’s opinions, even under Sunoco’s comparable license theory.

2. The district court properly concluded that Ugone failed to satisfy the entire market value rule, which dooms Sunoco’s convoyed sales argument as well

This Court should similarly affirm the district court’s exclusion of Ugone’s entire market value rule opinion⁴ “because he d[id] not identify reliable evidence to allow Sunoco to ‘meet its burden to show that the patented feature was the *sole driver* of consumer demand.’”⁵ Appx22 (citing *Power Integrations, Inc. v. Fairchild Semiconductor Int’l, Inc.*, 904 F.3d 965, 979-80 (Fed. Cir. 2018)). The district court’s finding is amply supported by the record, including undisputed testimony from Sunoco’s witnesses, who touted the *non-patented features* as valuable and a “selling point” for customers. Appx5343(139:18-141:2); Appx5336(70:9-21); Appx5343(141:7-20); Appx5347(48:4-7).

Sunoco’s attempts to show reversible error all fall flat. For example, Sunoco (at 38) relies on Ugone’s citation of Myers opinion testimony that “one hundred percent of [Sunoco’s] income . . . *probably is related* to the patents.” Appx8984(¶18(a)); Appx7585-7586(113:3-114:21). Sunoco likewise notes (at 39) Ugone’s reliance on Colella’s opinion testimony that “Kinder Morgan’s license with Sunoco really reflects the strength of the patents.” Appx8984-

⁴ Sunoco complains (at 37) about the exclusion of Ugone’s first report but that cannot constitute reversible error because the magistrate judge provided Ugone a second opportunity to establish the entire market value rule. Appx8713.

⁵ All emphasis added unless otherwise noted.

8985(¶18(c)-(f)); Appx7626(163:5-164:16). Not only does this testimony fail to establish the patents *alone* are what motivated customers to enter BSAs, but it is speculative and conclusory and thus insufficient to meet Sunoco’s burden. *See LaserDynamics*, 694 F.3d 51, 67 (Fed. Cir. 2012). Further, neither Myers nor Colella specifically identified the *asserted* patents as driving demand the BSAs, as opposed to the other patents licensed under each BSA. *See Apple Inc. v. Wi-LAN Inc.*, 25 F.4th 960, 973 (Fed. Cir. 2022).

Sunoco could have presented evidence *from customers* on why they enter BSAs, and what role (if any) the asserted patents play in that decision, but it chose not to. This is thus not a case, as Sunoco contends (at 39), of the district court improperly weighing evidence. It was a failure of proof that rendered Ugone’s opinions unreliable and thus improper to send to the jury. *See Virnetx, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1328 (Fed. Cir. 2014) (holding expert’s testimony should have been excluded for failure to “demonstrate[] that the patented features drove demand” for the accused products).

Similarly, Sunoco says (at 38) Ugone did not “simply speculate[]” that Sunoco’s patents led Phillips 66 to become Sunoco’s customer, because he relied on witness testimony. Appx22. But again the testimony he relied on was not from Phillips 66; it was a Sunoco witness, Myers, who merely stated his self-serving, hearsay *belief* that Phillips 66 entered into a Sunoco BSA to avoid infringement. Appx15379-15380(233:11-234:10); Appx8981 n.38. Further, the record contradicts Myers’ supposed belief: Colella testified that Phillips 66

entered into the BSA for Sunoco's know-how—an unpatented service—because Phillips 66 had trouble getting its system to work. Appx7626(164:6-165:13).

Sunoco's reliance (at 39) on Ugone's speculation that Magellan took over the Perimeter BSA for Sunoco's patents fares no better. Magellan's witness said the opposite: that Magellan bought the Perimeter terminal based on its strategic location, not because of Sunoco's patents, and that Magellan would have preferred that Sunoco's BSA *was not* in place. Appx22512-22513(744:4-745:9). In view of such contradictory evidence, the district court did not abuse its discretion in finding Ugone's conclusory opinion that the patents are the sole driver of the BSAs factually and legally infirm. Appx25.

The district court also properly rejected Sunoco's theory that its patents are what “substantially created the value” of the BSAs. Appx23-24. While Sunoco emphasizes (at 40) that “[n]o one has ever sought Sunoco's ‘non-patented’ services outside of a BSA,” and speculates that the non-patented algorithm and services “have no value apart from their use in and with the patented invention,” even if true, that is insufficient to show the patents are the “sole driver” of the BSAs. This Court has held that even if the unpatented features are “commercially unviable” without the patents (which is unsupported here), that would still not be enough to avoid apportionment. *LaserDynamics*, 694 F.3d at 68; Appx23.

Finally, Sunoco cannot succeed on its convoyed sales argument (at 40-43), because Sunoco it needed to show the entire market value rule applied as a

prerequisite, which it failed to do. *See Juicy Whip, Inc. v. Orange Bang, Inc.*, 382 F.3d 1367, 1371-72 (Fed. Cir. 2004). Sunoco’s theory is also divorced from the facts. Sunoco says (at 42) that its blending algorithm is part of Sunoco’s patented system, but it is undisputed that the algorithm is not disclosed in any patent and that Sunoco provides *a separate license* to it, apart from the patent license. Appx23-25; Appx5053-5054; Appx5206-5208; Appx5222; Appx5336(70:9-21); Appx5343(141:7-20). Sunoco also says (at 42) that it could not “license rights to its patented system” without providing the algorithm but does not explain why that is true. Notably, Sunoco (at 30) contradicts itself, stating “[t]he only thing that Sunoco’s licensees could not provide by themselves was rights to Sunoco’s patents.” Sunoco has thus failed to show the district court erred in requiring Ugone to apportion the unpatented features,⁶ under either an entire market value or convoyed sales theory.

3. The district court properly found Ugone’s *Panduit* factors analysis did not obviate the need to apportion

Sunoco’s third attempt to avoid apportionment for its lost profits opinions fails based on Ugone’s *Panduit* analysis fails as well.

⁶ Sunoco’s attempt (at 42-43) to show *some* of the BSAs’ unpatented services are convoyed sales is insufficient; it needed to show they are *all* convoyed sales, which Sunoco does not even attempt to do.

First, the district court did not err in finding Ugone failed to make a *prima facie* showing of lost profits under *Panduit*. To calculate Sunoco’s lost profits, Ugone relied on **the full** 40% profit share Sunoco receives through its BSAs. Appx7503-7506(¶¶107-109). The fundamental flaw is that, again, the BSAs indisputably represent more than just the value of the patented invention, so the 40% rate needed to be apportioned. *See e.g.*, Appx8704-8706.

None of Sunoco’s cited cases compel a different result. In *Versata Software, Inc. v. SAP America, Inc.*, the reasonable royalty was based on a comparable license limited to only those sales covering the accused product, which the BSAs are not. 717 F.3d 1255, 1266-67 (Fed. Cir. 2013). Similarly, in *Georgetown Rail Equipment Co. v. Holland L.P.*, Georgetown’s expert made a *prima facie* showing of lost profits using “sound economic proof confirmed by the historical record,” and there was no argument regarding failure to apportion. 867 F.3d 1229, 1242-43 (Fed. Cir. 2017). Here, Ugone’s analysis relied on BSAs that reflect value beyond the patents, so he could not make a proper *prima facie* showing under *Panduit* without apportioning the value of the patents from the other services.

Second, Sunoco cannot rely on *Mentor Graphics Corp. v. EVE-USA, Inc.*, (at 33-34) to avoid apportionment because Ugone did not prove the first two *Panduit* factors. 851 F.3d 1275, 1285 (Fed. Cir. 2017); *see also WesternGeco LLC v. Ion Geophysical Corp.*, 913 F.3d 1067, 1073 (Fed. Cir. 2019). On “demand for the product as a whole,” Sunoco relied on evidence of demand **for**

BSAs, not the patents. Appx8710. While Sunoco insists (at 35) that the demand for both is the same because “[o]ne cannot get either without the other,” that is incorrect. Sunoco’s unwillingness to license its patents outside of BSAs does not mean that customers enter BSAs **solely** to gain a license to the patents. See Appx14505-14506(81:4-82:2). The evidence contradicts this: customers enter BSAs for Sunoco’s “basket of services” and its unpatented algorithm. See Statement of the Case, Section I.A. On the “absence of non-infringing alternatives,” Sunoco merely says (at 34) there is an absence, but the evidence contradicts Sunoco’s assertion. Magellan witness Hitz testified that Magellan could blend just as well using non-infringing manual blending. Appx22467-22468(699:8-700:22). And, following the jury’s verdict of infringement, PSL switched to manual operation, demonstrating a suitable non-infringing alternative. Appx21263-21264; Appx21283-21285.

In sum, the district court properly found Ugone’s *Panduit* analysis did not obviate the need to apportion and it did not abuse its discretion in striking Ugone’s opinions.

4. The district court properly held Ugone’s apportionment analysis was unreliable

Finally, Sunoco has failed to show the district court abused its discretion in holding Ugone’s supplemental apportionment analysis unreliable. As explained, Ugone did no more than shave off a fraction of a cent for some of the BSAs’ “basket of services,” while wholly ignoring others. Appx8989-8995. In

particular, Ugone failed to account for the blending algorithm, which undisputedly has value. Appx24. That alone doomed Ugone's analysis.

Sunoco's suggestion (at 45) that Ugone *did* account for the value of the blending algorithm is wrong. The support Sunoco cites for this assertion shows Ugone *acknowledged* the algorithm "is what . . . allows a butane blending system to blend the maximum allowable amount" but he did not reduce his damages calculations to account for its value, because he said customers would not demand the algorithm separate from the patents. Appx8972-8976(¶5(b)); Appx8989-8990(¶26(a)). That is not a valid excuse to avoid apportionment. The question for apportionment is not whether there would be a demand for a product feature separate from the product as a whole; it is whether the product as a whole has features beyond the patent that consumers find valuable. *See Power Integrations*, 904 F.3d at 979. Because the non-patented algorithm undisputedly contributes value to the system, Ugone needed to apportion that value from the BSAs. The district court properly found Ugone's failure to do so rendered his opinions inadmissible.

Sunoco's cited cases are inapposite. In *ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc.*, this Court concluded the challenged expert's methodology was sound, so it said "disputes about the degree of relevance or accuracy . . . may go to the testimony's weight, but not its admissibility." 694 F.3d 1312, 1333 (Fed. Cir. 2012) (quotations omitted). Here, Ugone failed to account for the value of all parts of the BSAs, so his methodology was, by

definition, legally unsound. Further, unlike the expert in *ActiveVideo*, Ugone did not use the BSAs as “benchmarks” to determine to determine a reasonable royalty; he ***wholesale applied*** the full 40% rate from the BSAs. *Id.* *VirnetX* is similarly unhelpful to Sunoco. There, this Court found the district court did not abuse its discretion in allowing the jury to evaluate the expert’s royalty rate testimony based on allegedly comparable licenses. 767 F.3d at 1329-30. That case says nothing about whether the district court here abused its discretion in ***precluding*** an expert from calculating damages based on the full value of an allegedly comparable license that undisputedly encompasses value beyond the patents.

5. The district court properly excluded Ugone’s remaining damages opinions for failure to apportion

Sunoco separately asserts (at 52-56) the district court erred in excluding theories it says were “unchallenged.” But, to the extent they were initially “unchallenged,” that was because Sunoco never advanced them as affirmative damages theories. Sunoco nonetheless had an opportunity to defend both, and the district court properly found them unreliable for failure to apportion.

Lost Opportunity Cost Theory. Ugone only mentioned this theory—based on the assumption that blending butane at PSL would decrease the amount of butane that could be added at Sunoco terminals downstream of PSL—as a potential factor in the hypothetical negotiation. Appx25; Appx9520. None of his reasonable royalty damages reflected a “lost opportunity cost”

analysis or calculation, so there was no distinct damages opinion to challenge. Appx9520; *See e.g.*, Appx7431-7433; Appx7572-7573(¶¶ 199-200); Appx8997-8998(¶31). When Sunoco recast Ugone’s analysis of this consideration as an *affirmative* theory in its *Daubert* response, Cross-Appellants challenged its reliability. Appx9520. The district court did not abuse its discretion in addressing Cross-Appellants’ challenge to Sunoco’s shifting damages theories.

The district court also did not abuse its discretion in finding Ugone’s lost opportunity cost analysis unreliable. Appx25. Ugone ascribed all anticipated profits loss from PSL blending to Sunoco’s patents, instead of isolating only the profits lost from *infringing* blending at PSL. Appx8997-8998(¶31). As Sunoco’s witness acknowledged, *manual* blending (which is not covered by Sunoco’s patents) at PSL would also lead to lost blending downstream, so Ugone needed to account for it. Appx9525(41:9-18). While Sunoco says (at 54) that Ugone understood “manual blending would not be feasible” at PSL, that understanding is based entirely on the hearsay of unnamed “Sunoco personnel,” and thus cannot excuse his failure to apportion. Appx7469 (¶61). Further, this hearsay understanding was untrue, as demonstrated by PSL’s successful switch to manual blending following the jury verdict. Appx21263-21265; Appx21283-21284. The district court thus did not abuse its discretion in excluding Ugone’s unapportioned “lost blending opportunity” theory. Appx25.

Texon/Buckeye BSA Theory. After having Ugone’s BSA-based theories excluded, Sunoco, for the first time, relied on the 30% provision from

the Buckeye Agreement to try to assert nearly the same amount of damages as its BSA theory. Specifically, Sunoco took the 30% profit share it would receive from the Texon/Buckeye BSAs and *wholesale applied* it to the accused volumes and profit margins to calculate damages. *See* Appx15119-15129. The district court properly shut down Sunoco’s belated attempt to rely on yet another unapportioned BSA for damages. Appx15964-15965; *see also* Appx14505-14506(80:19-82:11).

While Sunoco says Ugone’s Texon/Buckeye BSA-based opinions were “unchallenged,” that is only because Sunoco did not originally rely on any provision of the Buckeye Agreement to calculate damages. Appx15975(30:5-20) (district court noting that “it is clear from the record and I think everyone understands it, [Sunoco] did not in a timely manner affirmatively disclose what they want to do with the [Buckeye agreement] as an affirmative theory of damages.”). In fact, Ugone first mentioned the Buckeye Agreement provisions in his *reply* report, and said they were *not relevant*. Appx7402-7404(¶ 46(b) (“[E]ven assuming the agreement covering the Buckeye terminals was a relevant value indicator for the hypothetical negotiations (which it is not)...”). All of this demonstrates not only that Sunoco failed to make any affirmative damages arguments based on the Buckeye Agreement in a timely manner, but that the district court did not abuse its discretion in rejecting those arguments.

For the reasons explained above, the Court should affirm the district court’s exclusion of Ugone’s damages theories.

C. The District Court Did Not Abuse its Discretion in Precluding Sunoco from Seeking Damages Based on Unapportioned BSAs At Trial

At trial, the district court properly concluded that, with no witness to evaluate the *Panduit* factors or properly apportion the BSAs, Sunoco could not reliably prove lost profit damages, and could not base any reasonable royalty damages on the unapportioned BSAs. Sunoco has shown no error in the district court's rulings.

1. The district court properly declined to instruct the jury on lost profits

Sunoco could not demonstrate the profits owed under *Panduit* for Magellan's infringement⁷ because Ugone failed to apportion the BSAs. Because no fact witness could (or did) perform the proper apportionment, the district court properly excluded Sunoco's lost profits theory at trial and declined to instruct the jury on it. The district court did not err in its instructions.

While Sunoco focuses (at 58-59) on whether an expert is required in all cases to support lost profits, that is the wrong question.⁸ Here, the district court properly recognized that Sunoco had no properly apportioned lost profits theory to even present to the jury, with an expert or without. Sunoco's cited witness testimony (at 59-60) does not demonstrate such apportionment. At most,

⁷ Sunoco did not seek lost profits from PSL. Appx7475(¶ 72).

⁸ Sunoco cited cases (at 58-59) on an expert not being required to prove lost profits are inapposite because none involved a failure to reliably apportion.

Sunoco cites Colella’s testimony, where he “estimate[d]” that Sunoco’s hedging services (one service of many) were worth one cent. Appx23143-23145(1375:2-1377:5). Even if this conclusory and speculative testimony was reliable, it fails to apportion the value of *all* unpatented services from the BSAs. Sunoco’s blanket citation (at 60) to most of its cross-examination of Maness is similarly unhelpful; indeed, Sunoco does not explain what of that testimony it deems “favorable” to its lost profits theory. And Maness consistently testified that the BSAs included a basket of services apart from the patents and thus were an improper measure of damages. *See e.g.*, Appx23195(1427:14-19).

Sunoco’s argument (at 60) that the district court sidestepped summary judgment or JMOL safeguards is also wrong. As Sunoco notes, the district court denied Cross-Appellants’ summary judgment motion of no damages, holding “a reasonable juror could find that Sunoco is entitled to a *reasonable royalty*” based on, in part, Maness’s opinions regarding the \$0.02/gallon royalty rate. Appx14507-14510(86:20-98:18). The district court said nothing about *lost profits*. Further, it reiterated that no fact witness would be allowed to argue the full value of the BSAs is “attributable to the patents-in-suit,” and that, “[r]elatedly, someone must apportion, and that apportionment is an expert task, not a task for a fact witness.” Appx14509 (95:18-97:22).

The district court’s refusal to instruct on lost profits was not, as Sunoco suggests (at 60), a new summary judgment decision warranting *de novo* review. Instead, it was the natural result of its previous *Daubert* rulings, given that

Sunoco had no witness to reliably apportion the BSAs. The district court’s ruling is also fully consistent with its instruction to the jury on reasonable royalty damages, because the jury heard reasonable royalty theories through Maness that ***did not*** rely on unapportioned BSAs. *See e.g.*, Appx23174-23187(1406:11-1419:22); Appx23189-23190(1421:23-1422:11); Appx23199-23200(1431:24-1432:8); *see also* Appx14507(89:3-90:7). The district court thus did not abuse its discretion in instructing the jury on reasonable royalty but not lost profits.

2. The district court did not abuse its discretion in barring Sunoco from asking the jury to speculate on damages

Sunoco persisted until the very last minute in trying to extract inflated damages based on the BSAs. Because it could not use the full value of the BSAs, Sunoco tried, without any support from the record, to have ***the jury*** apportion the BSAs by guessing as to some intermediate value that would reflect the value of the patents. Appx23229-23231(1461:5-1463:2). It was not an abuse of discretion to bar Sunoco from inviting such juror speculation. As the district court succinctly noted: “that’s not apportionment.” Appx23229-23231(1461:2-1463:15); *see generally* Appx23225-23237(1457:20-1470:3).

Sunoco’s brief (at 61-62) supports this point. Sunoco says the jury heard evidence of the BSA profit-sharing terms and “possible apportionment” but it does not identify what that evidence was. Most of Sunoco’s citations are to Colella’s testimony indicating his belief that customers entered BSAs for the

patents, but that does not show any apportionment. Only once did Colella try to value any of the unpatented BSA services, and there he just speculated about hedging and maintenance, ignoring the others. Appx23143-23144(1375:22-1376:13). That is plainly insufficient to allow the jury to arrive at a non-speculative and properly apportioned damages award, as the district court correctly found. Appx23225-23233(1457:20-1465:15). Tellingly, Sunoco cites no case supporting its position other than (at 62) *Meyer Intellectual Props. Ltd. v. Bodum, Inc.*—a case that has nothing to do with damages or apportionment. 690 F.3d 1354, 1375-76 (Fed. Cir. 2012).

In the end, each of Sunoco’s attempts to extract unsupported damages fall flat. As the district court aptly put it, “Sunoco has knowingly, for three years, and willfully taken the risk that it would end up right where it is by tethering its damages case to a damages model of Dr. Ugone that has been subject to criticism for three years, not just in this court but in the Northern District of Illinois as well.” Appx14509(94:8-15). Sunoco’s unhappiness with the district court’s decisions is the result of its own doing and is no basis for a new trial.

III. THE DISTRICT COURT DID NOT CLEARLY ERR IN GRANTING JMOL OF NON-INFRINGEMENT

The Court properly granted JMOL of non-infringement based on Sunoco’s failure of proof. The challenged claims require “receiving” or “transmitting” a butane vapor pressure measurement. Appx140. For both limitations, Sunoco’s expert only offered testimony that the butane vapor

pressure value is “baked in” or “used” in Cross-Appellants’ blending equation. Appx140. In neither instance did he explain how the accused systems “transmitted” or “received” the butane vapor pressure under the plain and ordinary meaning of those terms. Appx140; Appx23604(37:19-40:7). The district court thus correctly found substantial evidence did not support the jury’s infringement verdict for these claims. Appx140.

Rather than address its evidentiary deficiencies, Sunoco says (at 64) that Cross-Appellants’ position raises a novel claim construction. Not so. Cross-Appellants merely argued a straightforward application of the plain language of the claims, which requires that the butane vapor pressure is “transmitted” or “received” as part of the blending process. Appx140-141 n.3.

Sunoco is also incorrect (at 63) that Cross-Appellants failed to adequately raise these arguments before the jury verdict. Cross-Appellants argued in their Rule 50(a) motion that Sunoco did not prove Cross-Appellants have knowledge of the butane RVP. Appx22907(1139:1-19); Appx22909-22911(1141:7-1143:14); Appx22441(673:4-11). In context, that motion was “sufficiently specific” to put Sunoco on notice of Cross-Appellants’ arguments on the “receiving” and “transmitting” limitations, because if Cross-Appellants do not know the butane RVP, they cannot receive or transmit the butane RVP, either. *Smith v. Katz*, 696 F. App’x 582, 589 n.8 (3d Cir. 2017) (non-precedential) (quotation marks omitted); *Leader Techs., Inc. v. Facehook, Inc.*, 770 F. Supp. 2d 686, 714 (D. Del. 2011), *aff’d* 678 F.3d 1300 (Fed. Cir. 2012) (noting “the

communicative content, specificity and notice-giving function of an assertion should be judged in context” when evaluating JMOL motions) (quotations omitted). The district court thus did not err in granting Cross-Appellants’ properly preserved JMOL motion of non-infringement.

IV. THE DISTRICT COURT DID NOT ABUSE ITS DISCRETION IN DECLINING TO AWARD ENHANCED DAMAGES

Enhanced damages “are not to be meted out in a typical infringement case” but are instead designed as a ‘punitive’ or ‘vindictive’ sanction for egregious infringement behavior.” *Halo*, 579 U.S. 93 at 103-04. Here, the district court analyzed the *Read* factors and properly found they did not support enhancement. Sunoco has not shown reversible error in the court’s analysis.

On factor one, the district court correctly found Sunoco failed to show Magellan copied Sunoco’s systems. In fact, the trial evidence demonstrated that Magellan had its own automated blending systems since 2001. Appx153; Appx22595(827:12-23); Appx22650-22655(882:20-887:16); Appx22710-22711(942:16-943:21). While the jury found these systems were not prior art, Appx20858, that does not mean it found they did not exist in 2001, and their existence is sufficient to support a finding of no copying. Nor does the jury’s willfulness verdict mean that the jury necessarily found copying based on evidence of its interactions with Texon. *See Ironburg Inventions Ltd. v. Valve Corp.*, 64 F.4th 1274, 1300 (Fed. Cir. 2023). As the district court found, the evidence showed Magellan was trying to get information from Texon to decide

whether to use Texon's systems, not to copy them. Appx153; Appx22498-22509(730:1-741:10). Even more, the PTO granted Magellan a patent over Sunoco's patents, further supporting that Magellan did not copy. Appx21645.

On factors three and five, the district court found Cross-Appellants' pre-litigation positions consistent with their litigation positions and that the case was close. Appx153-154. Sunoco cites *Halo* to insist (at 67) that both determinations are irrelevant "absent proof that [Cross-Appellants] knew of and acted on their trial defenses before infringing." But *Halo* does not mandate such proof. *Halo*, 579 U.S. at 105-106. Here, the district court found Cross-Appellants "acted reasonably and in good faith" and "presented considerable evidence in support of their assertions of non-infringement and validity," and properly found these factors weighed against enhancement. Appx154.

On factor seven, the district court properly found Magellan's switch from feedforward to feedback systems was a remedial measure and, given the closeness of the case, found this factor neutral. Appx155; Appx22260-22263(492:9-495:5). In disagreeing, Sunoco misstates the JMOL ruling of no willful infringement. There, the district court found "a reasonable juror could have concluded [Cross-Appellants] had no reasonable basis to believe that their systems did not infringe." Appx147. It does not follow that Cross-Appellants ***had no basis*** to believe its switch from feedforward to feedback avoided infringement. That Magellan received its own patent covering its blending

process over Sunoco's patents further supports the district court's conclusion that Cross-Appellants' switch was a remedial step. Appx23923-23939.

On factor eight, the district court correctly rejected Sunoco's reliance on the fact that both Sunoco and Magellan competed for the Colonial bid. Appx155. As the district court found, Magellan won that bid, not because it put forth an infringing design, but because it had more experience blending on large pipelines. *Id.*; Appx22724-22727(956:17-959:3). Sunoco tries (at 68-69) to minimize this evidence by again suggesting that the jury's willfulness finding means it necessarily endorsed Sunoco's characterization of the facts. It does not, and the district court did not abuse its discretion in finding this factor weighed against enhancement.

Finally, on factor nine, the district court properly determined that Magellan did not seek to conceal its infringement. Appx155. Instead, the evidence showed that inventor Mattingly knew Magellan had automated systems, was performing at least rack and pipeline blending, and even sent his own contractor to Magellan's terminals to examine Magellan's use of the Grabner online analyzer. Appx155; Appx22177-22178(409:16-410:21). That Mattingly could not testify to specific operational details of Magellan's systems does not mean Magellan concealed its activities, or that the district court committed error in its analysis of factor nine.

Because the district court did not abuse its discretion in refusing to enhance damages, this Court should affirm its ruling.

*****CROSS-APPEAL*****

V. THE DISTRICT COURT ABUSED ITS DISCRETION IN AWARDING SUPPLEMENTAL DAMAGES

The only damages issue the district court got wrong was in awarding Sunoco over \$6 million in *pre-verdict* supplemental damages based on an incorrect assumption that the jury could not calculate damages for the full damages period. The jury could have done so; Sunoco simply failed to present the necessary evidence. This Court should thus reverse the district court's award.

In closing arguments, Sunoco calculated damages for the jury by multiplying the \$0.02/gallon royalty rate times Cross-Appellants' accused blend volumes (in gallons). Appx23254-23257(1486:5-1489:11). Sunoco did so using only the accused blend volumes *through January 2019*, even though it had in its possession Cross-Appellants' blend volumes *through October 2021*. Appx21581. Instead, Sunoco argued that the data it admitted up to January 2019 was "the floor that [the jury] should consider." Appx23254-23257(1486:5-1489:11). The jury was then asked to decide the damages that "would fairly and reasonably compensate" Sunoco for infringement, without any restriction on the relevant damages period or indication that the jury was to provide on a partial damages remedy. Appx21092. The jury thus provided a deliberate assessment of what it deemed "fair[]" and "reasonable[]" through a lump-sum dollar amount.

Despite Sunoco's failure of proof at trial, the district court then awarded nearly \$6.5 million in supplemental damages (close to half of the total damages award) to account for the February 2019-October 2021 time-period. This award was an "improper invasion of the jury's province to determine actual damages." *Presidio Components Inc. v. Am. Tech. Ceramics Corp.*, No. 08-CV-335-IEG NLS, 2010 WL 3070370, at * 2 n.1 (S.D. Cal. Aug. 5, 2010), *aff'd in part, vacated in part*, 702 F.3d 1351 (Fed. Cir. 2012) (quotations omitted).

The district court improperly excused Sunoco's failure of proof because it assumed Sunoco had "no practical means of presenting these new volumes to the jury." Appx157. But Sunoco had ample time after Ugone's opinions were stricken and after receiving updated volumes to attempt to authenticate or admit them during trial; it just made no effort do so. For example, Sunoco could have sought another deposition of the witness it called to authenticate the prior blending data, asked that Cross-Appellants stipulate to the data's authenticity, or elicited authentication testimony from one of Cross-Appellants' fact witnesses or expert. It did none of these. While the district court said it was "not sure [authentication] efforts would have been successful," Appx157, that is plainly insufficient to grant Sunoco a windfall of damages it never proved.

Further, the district court based its skepticism on the fact that Cross-Appellants' objected to Sunoco admitting other blend data at trial, Appx157, but that data included blend volume for *non-accused blending systems*, Appx20895-20896. In other words, Cross-Appellants objection had no bearing

on whether Sunoco could have presented updated blend data that properly reflected only *infringing volumes*. And, even if Sunoco had tried to authenticate the updated volumes, and Cross-Appellants had objected, the district court could have overruled the objection. The fundamental problem is Sunoco made no such effort, despite having the burden to prove the damages it was owed. The district court erred in excusing Sunoco's failure of proof, and usurped the role of the jury, so this Court should reverse the supplemental damages award.

VI. THE DISTRICT COURT ERRED IN HOLDING THE ASSERTED CLAIMS NOT INVALID UNDER 35 U.S.C. § 101

This Court need not address any of the issues discussed above because it can and should hold the asserted claims patent ineligible. Here, the challenged claims—'302 claims 3, 16-17; '629 claims 18, 22, 32, and 32;⁹ and '686 claim 3—are directed to the abstract idea of gathering and/or receiving blend data and making a calculation and contain no inventive concept to shelter them from ineligibility. *See Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216-218 (2014). Indeed, the district court previously held ineligible multiple claims from the '302 patent that are strikingly similar to those at issue here—findings that Sunoco does not challenge on appeal. *See* Appx8752-8768; Appx9-11. The

⁹ The district court granted JMOL of noninfringement of '302 claims 16 and 17 and '629 claims 18 and 22. *See* Section III. Should this Court affirm that ruling, it need not address the eligibility of these claims.

Southern District of Texas also held similar claims of the '686 patent ineligible. *U.S. Venture Tex. Op.*, 598 F.Supp.3d at 535-541. The same logic applies to the challenged claims, so this Court should reverse the district court and hold the claims patent ineligible.

A. *Alice* Step One: The Challenged Patents Are Directed to Abstract Ideas

The challenged claims are directed to the abstract idea of gathering and/or receiving blend data and making a calculation with that data. *See, e.g.*, Appx23608-23609(56:24-57:21). In concluding otherwise, the district court ignored the results-oriented focus of the claims, improperly relied on alleged advances not recited in the claims, and made clearly erroneous findings as to prior blending operations. This Court should thus reverse.

- 1. The district court erred in concluding the '629 claims are directed to improved blending methods**
 - a. The '629 claims are directed to the abstract idea of gathering or receiving blending data to make a calculation**

The '629 claims are directed to the abstract idea of gathering or receiving blending data and using that data to make a calculation. Claim 31 of the '629 patent is representative:¹⁰

¹⁰ Claim 32 depends from claim 31, adding only the requirement of “generating a report comprising the second measurement,” and claims 18 and 22 contain similar limitations to claims 32. Appx21509; Appx23280-23281. Sunoco did

31. A computer-implemented method for blending a butane stream and a gasoline stream comprising the steps of:

- a) receiving a first measurement indicating a vapor pressure of the gasoline stream;
- b) calculating a blend rate at which the butane stream can be blended with the gasoline stream;
- c) transmitting an instruction to a programmable logic controller for adjusting the butane stream to the calculated blend rate for blending with the gasoline stream and distributing at a rack; and
- d) receiving a second measurement indicating a vapor pressure of the blended gasoline stream and butane stream.

Appx190(16:8-21).

Each step of claim 31 is data-driven, reciting “a computer implemented method” that involves “receiving,” “calculating,” and “transmitting” data. This Court has repeatedly held such data-focused claims patent ineligible. *See Two-Way Media Ltd. v. Comcast Cable Commc'ns, LLC*, 874 F.3d 1329, 1337 (Fed. Cir. 2017); *Elec. Power Grp., v. Alstom S.A.*, 830 F.3d 1350, 1353-56 (Fed. Cir. 2016) (citing cases). That claim 31 describes gathering and analyzing **butane blending** data, in particular, does not “change its character as information,” and thus does not make the claim any less abstract. *Elec. Power*, 830 F.3d at 1353.

Nor does the claim’s requirement to use the data to blend butane into gasoline save it from abstraction, because the claim fails to “identify ‘how’ that functional result [of blending] is achieved.” *Free Stream Media Corp. v. Alphonso Inc.*, 996 F.3d 1355, 1363 (Fed. Cir. 2021) (quoting *Am. Axle*, 967

not dispute that claim 31 is representative of the ’629 claims and made no separate eligibility argument for claims 18, 22, or 32. *See generally* Appx21743-21745.

F.3d at 1302). For example, claim 31 is silent as to what methods and equipment to use for taking and receiving the vapor pressure measurements and calculating the blend rate. The same is true for the “transmitting” step, which recites only the use of “off-the-shelf technology” (a generic PLC) “for its intended purpose.” *Chamberlain Grp., Inc. v. Techtronic Indus. Co.*, 935 F.3d 1341, 1348-49 (Fed. Cir. 2019). The claim provides no “technical details for the tangible components,” such as how the claimed instruction should be transmitted to the PLC, what the PLC does with that instruction, how the PLC adjusts the butane stream to the calculated blend rate, or how the blended stream is distributed at a rack. *Univ. of Fla. Research Found., Inc. v. Gen. Elec. Co.*, 916 F.3d 1363, 1368 (Fed. Cir. 2019). The claim is thus not “directed to a specific improvement in computer functionality but, instead, to the use of computers as a tool.” *Sanderling Mgmt. Ltd. v. Snap Inc.*, 65 F.4th 698, 703 (Fed. Cir. 2023)

Indeed, the claim is written so broadly that it preempts all methods for receiving vapor pressure measurements, all mathematical equations for calculating the blend rate, and all ways of using a generic PLC to add butane into gasoline and distribute to a rack. Tellingly, Sunoco’s algorithm to calculate the blend rate—which allows for maximum blending of butane into gasoline—is nowhere disclosed in any of its patents. Appx24-25. Such a “result-oriented” claim, that “amounts to encompassing ‘the principle in the abstract’ no matter how implemented,” fails *Alice* step 1. *Free Stream*, 996 F.3d at 1363; *SAP Am.*,

Inc. v. InvestPic, LLC, 890 F.3d 1016, 1021–22 (Fed. Cir. 2018) (a patent eligible claim must have “the specificity required to transform the claim from one claiming only a result to one claiming a way of achieving it”).

Notably, the district court similarly held related claims from the ’302 patent ineligible because they too recited data manipulation steps without sufficient specificity as to the components or methods used to achieve the functional result of blending. Appx8762-8764; Appx9-11. The district court’s analysis and holding as to the ’302 claims—which Sunoco does not challenge on appeal—applies equally to the ’629 claims, so this Court should likewise find the ’629 claims directed to an abstract idea.

b. The district court’s contrary conclusion is based on legal and factual errors

The district court incorrectly found the claims “directed to improved systems and methods for blending butane.” Appx125. The district court based its holding on the alleged advancements it identified between what it found was “conventional” manual blending and the claimed blending methods, without any analysis of the claims’ data-driven language and results-oriented focus, as described above. In doing so, the district court (1) improperly imported advances described in the specification into the claims; (2) imposed a heightened and improper burden on Cross-Appellants to establish conventionality at step 1; and (3) made factual findings related to prior art blending that directly contradict the record.

i. The district court erred in focusing on alleged advances not recited in the claims

The district court erred in concluding that claim 31 captures any alleged improvements over what the district court found were prior art blending operations. The only two improvements the district court identified were (1) blending downstream of the gasoline and butane storage tanks, “immediately before the gasoline is dispensed to a tanker truck,” and (2) “continuously controlling the ratio of gasoline and butane blended” with a process control unit (i.e., a computer). Appx125. Claim 31 does not recite either of these alleged advances, so they are irrelevant to the ineligibility analysis.

As to the first, the claim does not limit blending to “downstream” of anything—indeed, it does not describe where the butane is blended into the gasoline at all, much less whether it is upstream or downstream of unrecited storage tanks. At most, the claim requires that blending be done for “distributing at a rack,” but it does not limit the blending to “immediately” before such distribution, which is the alleged advance. *See ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 769 (Fed. Cir. 2019).

Sunoco’s own argument below confirms this reading of the claims. Sunoco argued (and the jury agreed) that Cross-Appellants’ systems—which undisputedly have a tank between the blending unit and the rack and thus do not blend butane and gasoline “immediately” before dispensing to a tanker truck—literally infringe the ’629 claims. Appx4915-4920; Appx22309-22312(541:4-

544:10); Appx22338-22353(570:1-585:17). The purported advance that the district court cited from blending “immediately” before distribution is not realized when there is a tank between the blending unit and the rack, because the tank would still need to be mixed, re-measured, and certified before release. Appx124-125; Appx128; Appx169(2:33-44). As such, even according to Sunoco, the claims do not reflect the purported advance described in the specification, so it cannot make the claims non-abstract. *See ChargePoint*, 920 F.3d at 769.

The same is true regarding the specification’s description of “continuously controlling” the blend ratio—that concept is nowhere in claim 31. All claim 31 says is to calculate a blend rate and transmit an instruction to a generic PLC to adjust the flow of butane. The claim is thus broad enough to encompass calculating a blend rate and adjusting the butane flow just once or intermittently, as opposed to continuously. *See ChargePoint*, 920 F.3d at 769. Beyond that, that claim says nothing about *how* to control the blend ratio (whether continuously or not), instead reciting only the use of a generic “computer” and “PLC” without any specific details. *See Trinity Info Media, LLC. v. Covalent, Inc.*, 2023 WL 4536366, at *6 (Fed. Cir. 2023).

Even if continuous control of the blend ratio using a computer was reflected in claim 31, that still would not save the claim because it is not the result of any invention by Sunoco. The ’686 background section cites a 1973 patent that demonstrates refineries had been continuously controlling blend

ratios *for decades* before Sunoco’s alleged invention. Appx198(2:25-31).

Further, continuously controlling the blend ratio was made possible because of the online analyzer, which Sunoco did not invent. Appx22172(404:10-12); Appx22185-22186(417:8-418:3). Before the online analyzer, an operator had to manually sample and measure the vapor pressure, which necessarily took time, and during that time, the blend ratio was uncontrolled. Appx7413(18:1-19:9); Appx21942-21943(174:13-175:13); Appx22733(965:7-966:2). The online analyzer replaced the operator by automatically and continuously sampling and measuring RVP, allowing the blend ratio to be automatically recalculated by connecting the analyzer to a computer. Appx22173-22174(405:19-406:22); Appx22181-22182(413:17-414:1); Appx22186(418:4-25). None of the claims recite an online analyzer, so neither it nor its use to “continuously control” the blend ratio can be the focus of the claims.

The district court’s conclusion that “the ’629 claims capture these improved blending methods” is thus incorrect. Appx126. Indeed, the district court merely reproduced the claim limitations verbatim, without any explanation as to how these limitations—which do not on their face reflect the alleged advantages—should be understood to capture them. *Id.* This Court should thus find the claims directed to the abstract idea of gathering or receiving blend data to make a calculation, and reject the district court’s conclusion that any alleged unrecited improvements constitute the “heart” or “focus” of the ’629 claims.

ii. The district court improperly required a showing of conventionality at step 1

This Court should reverse the district court’s step 1 holding for a second, independent reason: the district court improperly considered only what was “conventionally” done in the prior art and ignored undisputed evidence of prior art blending performed the same way as the ’629 method, but without a computer. That is not the legal standard at step 1, so this Court should reverse.

The district court found that “[c]onventional blending methods at tank farms involved blending butane directly from a truck of butane into a gasoline storage tank.” Appx123. Assuming that is true, the district court erred in focusing on *only* what was “conventional” and finding that, because the claimed methods did not simply automate the “conventional” blending, they could not be directed to abstract ideas. *See e.g.*, Appx124 n.3 (concluding that Cross-Appellants “failed to show that the claimed invention simply automates this prior manual blending” because it found Cross-Appellants’ evidence “d[id] not show that the claimed blending steps were conventional activities”); *see also* Appx 131 n.5 (rejecting Cross-Appellants’ trial evidence because it did not “show that the claimed steps were well-understood and conventional activities as of 2001”). That is because step 1 does not *require* a showing of

conventionality;¹¹ instead, step 1 simply asks about the claimed advance over the prior art, including whether the claimed methods were previously performed manually. Whether those previously performed methods were commonplace enough to be considered “conventional” is not dispositive at step 1, so the district court’s analysis is legally infirm. *See, e.g., PersonalWeb*, 8 F.4th at 1318 (finding “mere automation of manual processes using generic computers” fails step 1); *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1369 (Fed. Cir. 2018) (noting in the context of **step 2** that “[w]hether a particular technology is well-understood, routine, and conventional goes beyond what was simply known in the prior art”).

Cross-Appellants timely presented undisputed evidence that the prior art Kerr-McGee system manually performed the claimed blending steps. *See* Appx4870-4878; Appx4885-4907. At Kerr-McGee, the butane was not blended directly from butane trucks into a gasoline storage tank, which is what the district court found was “conventional” blending. Instead, as Sunoco explained in the application that led to the ’948 patent, at Kerr-McGee, gasoline was drawn from a pipeline; the butane was stored in a tank; a pipeline “connect[ed] the butane storage tank” to a blending skid; and a pump injected butane

¹¹ While this Court has said conventionality ***can be considered*** to determine the focus or heart of the claims, *see CareDx, Inc. v. Natera, Inc.*, 40 F.4th 1371, 1379 (Fed. Cir. 2022), where the district court erred by making conventionality a ***requirement*** to show the claims are directed to abstract ideas at step 1, *see* Appx123-124; Appx131 n.5.

“directly into the incoming [gasoline] pipeline stream,” before it reached the storage tank. Appx4892; Appx4896-4897. A Kerr-McGee operator would sample and measure the RVP of the gasoline and calculate the appropriate blend ratio. Appx4887; Appx4896; Appx4899; *see also Sunoco Partners Mktg. & Terminals L.P. v. U.S. Venture, Inc.*, 339 F. Supp. 3d 803, 825-26 (N.D. Ill. 2018) (*U.S. Venture SJ Op.*), *affd in part, vacated in part, rev'd in part on other grounds*, 32 F.4th 1161 (Fed. Cir. 2022). The operator would then enter the blend ratio into the system and a controller would “control the valves in the blending unit to mix the correct amount of butane and gasoline.” *U.S. Venture SJ Op.*, 339 F. Supp. 3d at 827; *see also* Appx4896. Finally, the operator would sample and measure the blended stream RVP and “[m]ake any appropriate adjustments to the blend ratio.” Appx4899.

Tellingly, the district court never compared Kerr-McGee to the claimed blending methods. Had it done so, the record would support only one conclusion: the '629 claims merely recite an automated Kerr-McGee operation. The only difference between claim 31 and the Kerr-McGee process is that, in Kerr-McGee, the operator determined the blend ratio and manually input it in the system for the PLC to control the butane flow, Appx4896; Appx4901-4903, whereas claim 31 recites using a computer to calculate the blend ratio and to transmit an instruction to the PLC to control the butane flow, Appx190(16:8-21). In other words, Kerr-McGee performed all the steps of claim 31 manually;

all claim 31 adds is the use of a computer. That is insufficient for eligibility, so this Court should reverse. *Univ. of Fla.*, 916 F.3d at 1368.

iii. The district court's findings as to prior art blending methods are clearly erroneous

If this Court determines that the district court properly required a showing of conventionality at step 1, then it should still reverse because the district court's findings as to conventional blending are clearly erroneous. The district court found that the claims do not simply automate prior art blending, but it did not clearly explain what else, beyond the automation, is different. It appears the district court concluded that conventional blending involved adding butane from a truck directly into a gasoline storage tank, as opposed to injecting butane into a gasoline stream. Appx124-125; Appx128. But the record evidence demonstrates that manual blending methods in which butane was added directly into a gasoline stream were also conventional.

The Kerr-McGee system provides one such example, and it is far from the one-off that the district court appeared to find it to be. *See, e.g.*, Appx4906 (noting that Texon's proposed blending system for Kerr-McGee "is presently utilized within our operation at other locations"). Indeed, the inventors described the Kerr-McGee system as a "tank blending system of the type disclosed in the background section of the present application," underscoring that it is a typical tank blending operation known in the prior art. Appx4877.

That alone is sufficient to show that systems like Kerr-McGee represent “conventional” blending.

Beyond that, the testimony of the inventors unequivocally demonstrates that “conventional” blending involved (1) sampling and measuring gasoline vapor pressure, (2) calculating the amount of butane to add to the gasoline using known formulas, (3) injecting butane into a flowing stream of gasoline (*not* just into a tank of gasoline), (4) and distributing the blended gasoline at a rack. As Mattingly testified, manual “tank blending systems” in the 1990s involved “sampling” the gasoline to “determine how much butane to put in,” pumping gasoline out of a gasoline tank and into a circulation line, pumping butane “into that circulating line” of gasoline, which then “goes back . . . into the [gasoline] tank.” Appx23422; Appx8327(78:24-79:20).

Mattingly further testified that “for years” people would blend butane into gasoline circulating lines that connected to a gasoline tank, and that, “from the tank” the blended gasoline went to a loading rack. Appx8328(98:3-11); Appx221645(397:4-14) (Mattingly was “aware before [his] patent that Williams was blending *in a pipeline* into a tank”); Appx22172-22173(404:20-405:4) (Mattingly describing Williams’ blending as “tank blending because they blended *going into the tank* and then would sample the tank to certify that tank being on. *And that’s exactly what we did with tank blending.*”); *see also* Appx22136(368:5-12) (noting, in manual blending, the butane truck “will offload into recirculating gasoline into the tank field”).

As to blend ratio calculations, Vanderbur testified that “probably since [the] ’60s,” tank blending involved “determin[ing] from a formula you probably had, probably the Chevron formula for butane blending” how much butane to add to the gasoline. Appx7413(18:1-24). The patent specification further confirms that calculating blend ratios to determine how much butane to add was “conventional,” citing publications describing such methods that date as far back as 1942. Appx185-186(6:67-7:15).

This evidence proves that conventional prior art blending was not limited to blending directly into a gasoline tank, as the district court found, Appx125, and instead encompassed blending butane into flowing gasoline streams as well. Claim 31 simply automates this manual blending—instead of a human operator calculating the blend ratio or rate and using that to inject butane into a gasoline stream, in claim 31, a computer performs those steps. To the extent the district court found prior art tank blending also differs from claim 31 because it involved sending blended gasoline into a tank before distribution, mixing the tank, sampling it, and certifying the RVP, that is irrelevant to the step 1 analysis. Appx123-124. As discussed above, claim 31 is not limited to blending “immediately” before distribution, and instead encompasses storing blended gasoline in a tank before distribution. As such, any benefits from blending “immediately” before distribution (i.e., bypassing the tank mixing, sampling, and certification) are simply not reflected in the claim.

The district court's factual errors on prior art blending induced it to incorrectly conclude this case is more analogous to the non-precedential, divided panel decision in *EcoServices* than the unanimous, precedential decision in *University of Florida*, when the opposite is true. The '629 claims merely automate prior art "'pen and paper methodologies' to conserve human resources and minimize errors," like those in *University of Florida*, and do not recite a "specific combination" of components, "configured in a certain way to create technical improvements to systems" of blending, as in *EcoServices*. 916 F.3d at 1367; 830 F. App'x at 643. The district court's step 1 holding is thus legally and factually incorrect, so this Court should reverse.

2. The district court erred in concluding the '302 claims are directed to improved blending methods

The challenged '302 claims fail step 1 for the same reasons as the '629 claims. '302 claims 16 and 17 recite many of the same of the limitations as the '629 claims and are similarly directed to gathering and transmitting blending data and making a calculation. *See* Appx175(14:3-50). While they recite some physical blending steps, as with '629 claim 31, those steps are drafted at such a high level of generality that they cannot be the focus of the claims. *See Free Stream*, 996 F.3d at 1363.

These '302 claims are similarly silent as to what mathematical equation to use to calculate the blend ratio, what equipment beyond "off-the-shelf technology" to use to transmit the blending data, and how to adjust the amount

of butane blended into gasoline. *Chamberlain*, 935 F.3d at 1348. And they contain no “technical details for the tangible components,” like the dispensing unit and rack (*see* claim 12) or the processing unit or PLC, to render them non-abstract. *Univ. of Fla.*, 916 F.3d at 1368; *SAP*, 890 F.3d at 1021-22; Appx8762-8764 (holding similar ’302 claims abstract at step 1); Appx9-11 (same).

Claim 3 of the ’302 patent is even more high-level, underscoring its focus on calculating a blend ratio. *See* Appx175(13:12-31). While it too includes “tangible components” like a blending unit, dispensing unit, and a rack (through claim 1) and physical blending steps (through claim 2), none are described with any level of specificity to render the claims non-abstract.

The district court’s contrary conclusion is incorrect for the same reasons discussed above regarding the ’629 claims. There is no mention of the alleged advance of “continuously controlling” the blend ratio in any of the claims. While claim 3 recites using a blending unit¹² downstream of the butane and gasoline tanks, and claims 3 and 13 recite dispensing blended gasoline at a rack, no claim requires blending “immediately” before dispensing at a rack. This lack of “immediacy” is consistent with Sunoco’s characterization of the claims as encompassing blending *into a tank* before dispensing at a rack.

¹² The district court held during claim construction that the claimed “blending unit” does not require automation and means “any conventional apparatus that achieves blending of two or more separate streams,” including, for example, a simple Y junction. Appx10740-10741.

The district court also erred in comparing prior art blending to the '302 claims. Tellingly, the Illinois Court concluded that the prior art Kerr-McGee system anticipates claims 1, 12, and 13 of the '302 patent—holdings that Sunoco did not challenge on appeal. *U.S. Venture SJ Op.*, 339 F. Supp. 3d at 825-26; *U.S. Venture I*, 436 F. Supp. 3d at 1112-13. It is thus undisputed that the prior art encompasses all the limitations of claims 1, 12, and 13, including those that recite physical blending. The claimed advance can then only come from claims 3, 14, 16 and 17, but all these claims add are limitations related to calculating a blend ratio—i.e., an abstract idea. The district court thus erred in concluding that the '302 claims are directed to improved blending methods, as opposed to the abstract idea of gathering blend data and making a calculation.

3. The district court erred in concluding the '686 claims are directed to improved blending methods

Claim 3 of the '686 patent also fails step 1 because it too is directed to gathering and receiving blending data and making a calculation using a computer. *See Appx205(15:62-16:23)*. While claim 1 recites a handful of “inputs” that are used in “calculating a blend ratio,” (e.g., “a gasoline flow rate that varies over time” or “a plurality of gasoline vapor pressures”), as with the '302 and '629 claims, the focus is still on “determining” various measurements and “calculating a blend ratio” based on those measurements. Claim 3 only adds that generic “information processing units” receive data and perform

calculations—again without any “technical details” or specificity as to how to perform these data-based functions. *Univ. of Fla.*, 916 F.3d at 1368.

The Southern District of Texas held claims 16-17 of the same patent ineligible for precisely these reasons. *U.S. Venture Tex. Op.*, 598 F. Supp. 3d at 531-36. As the Texas court concluded, these claims focus “on the calculation of the blend ratio,” and not an improved blending method, given they do not “mention piping or a device, and do not specify how vapor pressures or flow rates are measured, how the allowable vapor pressure is obtained, how the blend ratio is calculated, or how the petroleum and agent streams are blended to achieve a blend that is at or less than the allowable vapor pressure.” *Id.* at 534. The same is true of claim 3, which merely adds more data generation and manipulation steps—i.e., periodically determining flow rate and vapor pressure information and transmitting that data to another generic computer to perform the blend rate calculation.

The district court’s contrary conclusion suffers the same flaws as its conclusion on the ’302 and ’629 claims. For example, the district court found claim 3 directed to “a tightly controlled butane blending system with versatility that that can be used to blend butane with petroleum products at practically any point in the pipeline,” Appx130, but that recitation of the invention is in the ***specification***, not in the claims, so it cannot save the claim at step 1. *ChargePoint*, 920 F.3d at 769.

Further, the district court emphasized the claim’s requirement to “periodically determin[e]” the gasoline vapor pressure and flow rate and calculate the blend ratio based on that data, Appx130-131, but it ignored that Kerr-McGee operated the same way. There, butane was injected into a gasoline pipeline according to a calculated blend ratio, which was based on gasoline flow rate data and vapor pressure, and was periodically adjusted. Appx4887 (describing Kerr-McGee as an “in-line blending system” in which “samples of gasoline stocks are tested prior to the delivery of the butane” and “computer software” is used “to determine the volume of butane which can be blended”); Appx4896 (“The key input to a master controller is received from the new 6” turbine meter that measures the incoming gasoline flow rate.”); Appx4898 (the system will automatically shut down “if the flow rate through the [gasoline pipeline] measured by the 6” turbine meter drops” to a certain level); Appx4899 (“Make any appropriate adjustments to the blend ratio . . . Periodic sampling and RVP testing is recommended throughout the blend.”). All claim 3 adds is automation to prior art in-line blending, which is insufficient to save it from abstraction.

In sum, each of the challenged claims are directed to abstract ideas at step 1, so this Court should reverse the district court’s contrary holding.

B. *Alice* Step Two: The Claims Contain no Inventive Concept

This Court should further find the challenged claims do not contain an inventive concept under step two because they are directed to the automation of

conventional structures arranged in a convention manner. For example, the claims recite basic components of any butane blending operation (*i.e.*, gasoline and butane streams, tankage, programmable logic controllers, and processors) and the fundamental methods for performing any butane blending (*i.e.*, calculating a blend ratio and adjusting the flow of the butane stream and/or gasoline stream) that were well-known in butane blending for decades.¹³ *See, e.g.*, Appx21941-21943(173:18-175:13); Appx22293-22296(525:5-528:23); Appx21749; *U.S. Venture Tex. Op.*, 598 F. Supp. 3d at 536.

It is thus no surprise that Sunoco emphasized that the invention's novelty was its ***automated*** process for blending. *See e.g.*, Appx22180(412:4-18) (Mattingly testifying his "idea" was for "automated sampling" and having the system "controlled by a processor"); Appx22296(528:15-23) (Sunoco's expert explaining that the prior art did not "allow you to benefit from [the RVP] margin as tightly as the invention allows you to do it," which is result of "automation"); Appx7413(18:1-20:1) (Vanderbur testifying his idea was for "automated butane blending," where the system is "totally automated without any requirement and individual doing something"). But automating what was

¹³ The differences the district court found at step 1 between prior art blending and the claims cannot serve as the inventive concept because the claims do not recite any of these alleged differences and the record does not support the district court's findings on prior art blending operations. *See* Section VI.A.1.

known is not inventive, so the claims fail step two. *See OIP Techs., Inc. v. Amazon, Inc.*, 788 F.3d 1359, 1363-64 (Fed. Cir. 2015).

Nor do the claims recite a specific arrangement of components and steps that is inventive. Before the district court, Sunoco argued the “inventive concept” included the use of an online analyzer (which could automatically sample and measure RVP) to blend downstream of the refinery. Appx21749-21750. But the claims do not require any online analyzer, and Sunoco did not invent it, so it cannot be the inventive concept that saves the claims. Nor did Sunoco invent downstream blending—companies were blending at tank farms downstream of a refinery for decades before Sunoco’s purported invention. Appx169(1:65-2:33). Further, Sunoco’s position after trial belies its suggestion that the claims recite an inventive combination of elements: Sunoco agreed that Cross-Appellants did not infringe the challenged claims when they switched the automation off at PSL. Appx21495-21496. In other words, it is undisputed that Cross-Appellants could proceed with non-infringing blending, using the same arrangement of components and steps that were found to infringe the challenged claims, just by performing them manually.

Finally, to the extent Sunoco argues the claimed methods and systems allow for more accurate and efficient blending, such improvements are the natural result of using a computer and thus not inventive under step two. *See Trinity*, 2023 WL 4536366, at *7-8; *Solutran, Inc. v. Elavon, Inc.*, 931 F.3d

1161, 1169 (Fed. Cir. 2019); *Bancorp Servs., LLC v. Sun Life Assur. Co. of Canada (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012).

Because each of the challenged claims are directed to abstract ideas, and because there is no “inventive concept” in the claims to save them, this Court should reverse the district court and hold all claims invalid under Section 101.

CONCLUSION

For the foregoing reasons, this Court should hold all claims patent ineligible, obviating the need to address any other issues. Otherwise, this Court should affirm (1) the district court’s *Daubert* and trial rulings related to Sunoco’s unapportioned damages theories (based on collateral estoppel or lack of reversible error), (2) its grant of JMOL of non-infringement, and (3) its refusal to enhance damages, and reverse its award of supplemental damages.

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CERTIFICATE OF COMPLIANCE

The foregoing document is submitted in accordance with the type-volume limitation of Fed. Cir. R. 32(b). The Brief contains 15,874 words, excluding the parts of the brief exempted by Fed. R. App. P. 5(c), Fed. R. App. P. 21(d), Fed. R. App. P. 27(d)(2), Fed. R. App. P. 32(f) and Fed. Cir. R. 32(b)(2).

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